

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY ENERGY COMMISSION

Twin Falls Hydro Associates ) Project No. 4885-039

## ORDER APPROVING TEMPORARY REDUCTIONS IN MINIMUM FLOW RELEASES

( Issued July 16, 1996 )

On March 25, 1996, the Twin Falls Hydro Associates, licensee for the Twin Falls Project (FERC No. 4885) filed a request for a temporary reduction in the required minimum flow releases at the project's diversion dam. Specifically, the licensee proposes to reduce the minimum flow release from 150 cubic feet per second (cfs) to 75 cfs during May, June, and July, in 1996 and 1997. During the remainder of the year, the minimum flow release would remain the same as presently required by article 35 of the project license (i.e., 75 cfs). The project is located on the South Fork Snoqualmie River, in the Snohomish River Basin in King County, Washington.

## BACKGROUND

Article 35 requires the licensee to release from the project's diversion dam, from May 1 through July 31 annually, 150 cfs or inflow to the project, whichever is less, for the protection of aquatic resources in the South Fork Snoqualmie River. During the remainder of the year, the minimum flow requirement is 75 cfs, or inflow, if less. Article 35 further provides that the minimum flows may be modified for short periods upon mutual agreement among: the licensee; the joint agencies, comprised of the Washington Department of Fisheries and the Washington Department of Game (now combined into the Washington Department of Fish and Wildlife), the Tulalip Tribes of Washington (Tribes), the U.S. Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS); and the Washington State Department of Ecology (WDOE).

The licensee is requesting the minimum flow release reductions in order to study the impacts of the reduced flows on the aquatic resources of the South Fork Snoqualmie River. The licensee has been implementing aquatic habitat mitigation and conducting studies since the issuance of the current license in 1985. If no adverse impacts are found, the licensee intends to request that the temporary flow reduction be made permanent.

## AGENCY COMMENTS

Public notice of the licensee's filing was given on May 1, 1996, with May 21, 1996, as the final date for filing comments, protests, or motions to intervene. In response to the notice, the East King County Regional Water Association (EKCRWA), filed a letter on May 22, 1996. The EKCRWA stated that the proposed flow

Project No. 4885-039

-2-

reduction may have some interaction with their plans to develop a wellfield in the project vicinity. The EKCRWA stated that it wishes to be kept apprised of the scope and results of the past, ongoing, and future studies of fish habitat impacts from the Twin Falls Project in order to identify any additional mitigation requirements for their proposed groundwater withdrawal. No other comments, and no protests or motions to intervene were received.

The licensee has consulted with the requisite resource agencies in developing its request for the temporary flow reductions. By letter dated March 4, 1996, the State of Washington Department of Fish and Wildlife (WDFW) stated that, in accordance with prior agreements, they agreed to a test period of from two to four years, during which minimum flows could be reduced to 75 cfs. Similar letters were received from the USFWS (letter dated March 15, 1996), the WDOE (letter dated March 26, 1996), the NMFS (letter dated April 4, 1996), and the Tribes (letter dated April 18, 1996).

## DISCUSSION AND CONCLUSION

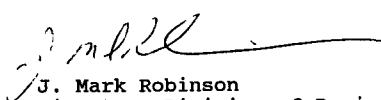
The licensee's request for flow reductions during May through July, during 1996 and 1997, represents a request for a continuation of habitat mitigation activities and related studies that have been ongoing at the project for over ten years. The studies are aimed at developing a better understanding of the relationships between aquatic habitats, flows, and fish populations in the project vicinity. This information will serve to guide future project operations.

Considering the information provided by the licensee and the support of the resource agencies, we find that the licensee's request is reasonable and should be approved. The licensee should keep the EKCRWA apprised of the results of the studies and any plans for future changes in flows at the project.

The Director orders:

(A) The licensee's request, filed March 25, 1996, to reduce minimum flow releases at the project's diversion dam, from May through July, 1996 and 1997, from 150 to 75 cfs, is approved.

(B) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. 385.713.

  
J. Mark Robinson  
Director, Division of Project  
Compliance and Administration

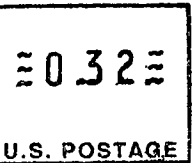
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UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Project No. 4885-035

-2-

Before Commissioners: Martin L. Allday, Chairman;  
Charles A. Trabandt, Elizabeth Anne Moler,  
Jerry J. Langdon and Branko Terzic.

Twin Falls Hydro Associates, Inc. ) Project No. 4885-035

## ORDER DENYING REQUEST FOR REHEARING

(Issued December 4, 1992)

By order of June 10, 1992, 1/ the Director, Division of Project Compliance and Administration (Division Director), made permanent the minimum flow releases originally established on an interim basis for the Twin Falls Project No. 4885, located on the South Fork of the Snoqualmie River in King County, Washington. Twin Falls Hydro Associates, Inc. (Twin Falls), licensee for the project, filed a timely request for rehearing of the Division Director's order, asking that minimum flow requirements be continued on an interim basis for five more years, during which time Twin Falls would attempt to implement measures and gather data that would justify lower minimum flows. For the reasons set forth below, we deny Twin Falls' rehearing request.

## BACKGROUND

In May 1985, the Commission issued the license for the 20-megawatt Twin Falls Project. 2/ The project is run-of-river and includes a 6-foot-high diversion structure that diverts water from the South Fork Snoqualmie through an intake channel and a penstock, creating a mile-long bypass reach in the river.

The project is located approximately 13 miles upstream of Snoqualmie Falls, an impassable barrier preventing the migration of anadromous fish species. The river upstream of the Falls supports a resident population of rainbow trout, cutthroat trout, and mountain whitefish.

In issuing the license for the Twin Falls Project, the Commission adopted on an interim basis the license applicant's proposed minimum flows in the bypassed reach of 75 cubic feet per second (cfs) from August 1 through April 30, and 150 cfs during

the spawning season from May 1 through July 31. 3/ The Commission also included in the license, as Article 37, the applicant's proposal to enhance trout habitat in a portion of the river upstream of the project by the placement of boulders and to conduct a five-year study of the trout populations (pre- and post-project operation) in the bypassed reach, in the reach proposed for habitat enhancement, and in a control reach. 4/ Article 37 further required the licensee to file the results of its study and recommendations for long-term minimum flows, along with comments of the resource agencies and the Tulalip Tribes of Washington. 5/

In adopting these measures, the Commission concluded that the minimum flows would adequately protect aquatic resources in the bypassed reach, and that, although some fishery habitat in that reach would be lost as a result of the reduced flows, the enhancement measures proposed for the upstream stretch of the river would adequately compensate for any such losses. The Commission also stated that if the study required by Article 37 showed that, following commencement of project operation, the combined trout populations of the bypassed and enhancement reaches exceed pre-project levels, a final, year-round flow of 75 cfs may be justified. 6/

The licensee's consultant gathered pre-project baseline data on the monitored reaches from 1984 through 1988. 7/ Boulders

3/ 31 FERC at p. 61,291.

4/ See Phillip J. Hilgert, Twin Falls Hydroelectric Project, FERC Project No. 4885-003, Aquatic Mitigation Plan (Danes & Moore), May 15, 1984. The plan proposed to enhance fish habitat and increase fish populations in an upstream reach of the South Fork Snoqualmie not affected by the project by placing boulder groupings in that reach.

5/ The Tulalip Tribes was an intervenor in the licensing proceeding and, in response to its request (agreed to by the license applicant), was included in certain license articles as a consulted entity.

6/ 31 FERC at p. 61,291.

7/ Snorkel and electrofishing surveys were used to count fish populations in the monitored reaches. In addition, the plan contemplated gathering two to three years of pre-project information and two years post-project. However, construction delays enabled the licensee to gather additional pre-project data, thereby extending the study an additional two years.

1/ 59 FERC ¶ 62,258.

2/ 31 FERC ¶ 61,151. The Commission issued the license to South Fork Resources, Inc., and in July 1989 approved a transfer of the license to Twin Falls. 48 FERC ¶ 62,069.

were placed in the enhancement reach during the fall of 1988. Project operation began in December 1989. The consultant conducted post-project fish population monitoring during 1990 and 1991.

On February 21, 1992, Twin Falls filed its report containing the results of its study. 8/ In its filing, Twin Falls stated that copies of the report had been sent to the Washington Department of Game (Washington), the U.S. Fish and Wildlife Service (FWS), and the Tulalip Tribes, but that comments had not yet been received. On March 16, 1992, Twin Falls filed its recommendation for permanent minimum flows, and on April 23, 1992, it submitted agency comments on the report and the recommended flows. 9/

Twin Falls' study concluded that there was no significant decrease in the number of trout in the areas affected by the project. Nor was there a significant increase in trout populations in areas enhanced by boulder placement. 10/ Twin Falls, citing to the conclusion that the project did not result in decreased fish populations, recommended a reduction in spawning flows (May, June and July) from 150 cfs to 75 cfs, which would result in permanent year-round minimum flows of 75 cfs. Twin Falls also proposed to monitor trout populations in the bypassed reach during this three-month period for three years to confirm that the new flows did not result in a net loss of fish. 11/ Twin Falls acknowledged that, in its recent meeting

8/ The report consisted of two parts: Hosey & Associates Engineering Company, Pre-Project Aquatic Mitigation Results 1984-1989, Twin Falls Hydroelectric Project, Twin Falls Hydro Assoc. FERC Project No. 4885-WA (July 1990); and Harza Northwest, Inc. Engineers and Scientists, 1991 Aquatic Mitigation Plan Results, Final Report, Twin Falls Hydroelectric Project, Twin Falls Hydro Assoc. FERC Project No. 4885-WA (December 1991) (Harza Report).

9/ The Tulalip Tribes did not submit comments.

10/ Harza Report, supra n. 8, at 11.

11/ Should this monitoring program reveal a statistically significant loss of fish, Twin Falls states that at the end of the three-year period the minimum flows would be increased during May, June and July, as necessary, up to a maximum of 150 cfs, to assure no net loss of trout. Additionally, Twin Falls would mitigate losses suffered, if any, during the three-year monitoring period by additional enhancement, by stocking trout, or by acquisition of off-site habitat for fish and wildlife.

with representatives of the resource agencies, it had been told that the agencies would not agree to any reduction in minimum flows until Twin Falls could demonstrate that its enhancement measures were successful in increasing fish populations in the enhancement reach. 12/

In their written comments on Twin Falls' recommended flows, Washington 13/ and FWS 14/ object to any lowering of the minimum flows. Washington and FWS argue that Twin Falls has not met the condition that might allow for such a reduction, i.e., increased trout populations in the enhancement reach. Washington points out that, without proven enhancement measures, any negative impacts resulting from lower flows would not be offset. Based on the results of Twin Falls study, FWS recommends continuation of the interim minimum flow releases.

The Division Director's June 1992 order declined to adopt Twin Falls' minimum flow recommendations, explaining that Twin Falls had failed to demonstrate any increase in adult trout population in the enhancement reach, so that any loss of fish in the bypassed reach that might result from lower flows would not be compensated. Nor did Twin Falls submit any biological justification for reducing the flows. The Division Director concluded that the current minimum flows are adequately maintaining the adult trout population, and accordingly denied Twin Falls' recommended flows and made permanent the interim minimum flow requirements. 15/

12/ In response, Twin Falls contended that the success of the fish enhancement program in the South Fork Snoqualmie could not be accurately measured, because of increased fishing pressure in that reach of the river. Twin Falls also cited other factors, such as floods, overwintering, and low summer flows, that may have limited the trout populations in the bypassed reach. Twin Falls did not however provide specific information to support these contentions.

13/ Letter dated March 13, 1992, to Twin Falls Hydro Company, Inc., from Instream Flow Biologist, Washington Department of Wildlife.

14/ Letter dated March 5, 1992, to Operations Manager, Twin Falls Hydro Company, Inc., from Field Supervisor, Fish and Wildlife Enhancement, Fish and Wildlife Service, Olympia, Washington.

15/ The Division Director also stated that, should Twin Falls develop other enhancement measures or collect further information indicating that the enhancement measures are

(continued...)

On rehearing, Twin Falls acknowledges that its study failed to demonstrate an increase in trout populations, a finding which would support a request to lower the minimum flow releases. Twin Falls explains that it was not aware that it needed to show an increase in fish populations to support a request for lower flows during the spawning season. Had it known this, it would have attempted to develop and implement additional enhancement measures or study techniques. Twin Falls therefore asks that the Commission refrain from adopting permanent minimum flows at this time, and instead extend the interim flows for five more years, during which it will attempt to gather data that would support lower minimum flow releases. 16/

## DISCUSSION

There is now sufficient information in the record on which to conclude that the interim minimum flows provide adequate protection of the fishery resources in the bypassed reach. As Twin Falls itself acknowledges, it has not submitted evidence sufficient to support a reduction in these flows. Twin Falls' rehearing request in essence seeks a further opportunity to demonstrate that reduced minimum flows for the spawning months are warranted.

Twin Falls' ability to submit information to support a finding that lower flows would adequately protect the fishery resources of the bypassed reach is unaffected by whether the existing flow requirement is labelled permanent or interim. Thus, while the Division Director's June 10 order did not impose further monitoring or enhancement requirements, Twin Falls is, as the Division Director noted, 17/ free to conduct further studies or develop mitigation or enhancement measures that, if approved and implemented, could result in lower minimum flows. Accordingly, there is no reason to restore the current flow requirement to interim status, and we therefore deny Twin Falls' rehearing request.

## 15/ (...continued)

effective in increasing the adult trout population in that reach, it may present this information in a future request to adjust the minimum flow requirements of the license.

16/ Twin Falls continues to argue that increased recreational fishing pressure has affected the study results. It offers to monitor and quantify the effect of fishing on the trout populations during the extended study period, and to work with FWS and Washington to develop an alternative monitoring plan and studies.

17/ See n. 15, *supra*.

The Commission orders:

The request for rehearing filed by Twin Falls Hydro Associates, Inc., on July 10, 1992, is denied.

By the Commission.

( S E A L )

*Lois D. Cashell*  
Lois D. Cashell,  
Secretary.

62

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Article 16. Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

Article 17. The Licensee shall construct, maintain, and operate, or shall arrange for the construction, maintenance, and operation of such reasonable recreational facilities, including modifications thereto, such as access roads, wharves, launching ramps, beaches, picnic and camping areas, sanitary facilities, and utilities, giving consideration to the needs of the physically handicapped, and shall comply with such reasonable modifications of the project, as may be prescribed hereafter by the Commission during the term of this license upon its own motion or upon the recommendation of the Secretary of the Interior or other interested Federal or State agencies, after notice and opportunity for hearing.

Article 18. So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

Article 19. In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

Article 20. The Licensee shall consult with the appropriate State and Federal agencies and, within one year of the date of issuance of this license, shall submit for Commission approval a plan for clearing the reservoir area. Further, the Licensee shall clear and keep clear to an adequate width lands along open-conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. Upon approval of the clearing plan all clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Article 21. Timber on lands of the United States cut, used, or destroyed in the construction and maintenance of the project works, or in the clearing of said lands, shall be paid for, and the resulting slash and debris disposed of, in accordance with the requirements of the agency of the United States having jurisdiction over said lands. Payment for merchantable timber shall be at current stumpage rates, and payment for young growth timber below merchantable size shall be at current damage appraisal values. However, the agency of the United States having jurisdiction may sell or dispose of the merchantable timber to others than the Licensee: Provided, That timber so sold or disposed of shall be cut and removed from the area prior to, or without undue interference with, clearing operations of the Licensee and in coordination with the Licensee's project construction schedules. Such sale or disposal to others shall not relieve the Licensee of responsibility for the clearing and disposal of all slash and debris from project lands.

**Article 22.** The Licensee shall do everything reasonably within its power, and shall require its employees, contractors, and employees of contractors to do everything reasonably within their power, both independently and upon the request of officers of the agency concerned, to prevent, to make advance preparations for suppression of, and to suppress fires on the lands to be occupied or used under the license. The Licensee shall be liable for and shall pay the costs incurred by the United States in suppressing fires caused from the construction, operation, or maintenance of the project works or of the works appurtenant or accessory thereto under the license.

**Article 23.** The Licensee shall interpose no objection to, and shall in no way prevent, the use by the agency of the United States having jurisdiction over the lands of the United States affected, or by persons or corporations occupying lands of the United States under permit, of water for fire suppression from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license, or the use by said parties of water for sanitary and domestic purposes from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license.

**Article 24.** The Licensee shall be liable for injury to, or destruction of, any buildings, bridges, roads, trails, lands, or other property of the United States, occasioned by the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license. Arrangements to meet such liability, either by compensation for such injury or destruction, or by reconstruction or repair of damaged property, or otherwise, shall be made with the appropriate department or agency of the United States.

**Article 25.** The Licensee shall allow any agency of the United States, without charge, to construct or permit to be constructed on, through, and across those project lands which are lands of the United States such conduits, chutes, ditches, railroads, roads, trails, telephone and power lines, and other routes or means of transportation and communication as are not inconsistent with the enjoyment

of said lands by the Licensee for the purposes of the license. This license shall not be construed as conferring upon the Licensee any right of use, occupancy, or enjoyment of the lands of the United States other than for the construction, operation, and maintenance of the project as stated in the license.

**Article 26.** In the construction and maintenance of the project, the location and standards of roads and trails on lands of the United States and other uses of lands of the United States, including the location and condition of quarries, borrow pits, and spoil disposal areas, shall be subject to the approval of the department or agency of the United States having supervision over the lands involved.

**Article 27.** The Licensee shall make provision, or shall bear the reasonable cost, as determined by the agency of the United States affected, of making provision for avoiding inductive interference between any project transmission line or other project facility constructed, operated, or maintained under the license, and any radio installation, telephone line, or other communication facility installed or constructed before or after construction of such project transmission line or other project facility and owned, operated, or used by such agency of the United States in administering the lands under its jurisdiction.

**Article 28.** The Licensee shall make use of the Commission guidelines and other recognized guidelines for treatment of transmission line rights-of-way, and shall clear such portions of transmission line rights-of-way across lands of the United States as are designated by the officer of the United States in charge of the lands; shall keep the areas so designated clear of new growth, all refuse, and inflammable material to the satisfaction of such officer; shall trim all branches of trees in contact with or liable to contact the transmission lines; shall cut and remove all dead or leaning trees which might fall in contact with the transmission lines; and shall take such other precautions against fire as may be required by such officer. No fires for the burning of waste material shall be set except with the prior written consent of the officer of the United States in charge of the lands as to time and place.



Article 29. The Licensee shall cooperate with the United States in the disposal by the United States, under the Act of July 31, 1947, 61 Stat. 681, as amended (30 U.S.C. sec. 601, et seq.), of mineral and vegetative materials from lands of the United States occupied by the project or any part thereof: Provided, That such disposal has been authorized by the Commission and that it does not unreasonably interfere with the occupancy of such lands by the Licensee for the purposes of the license: Provided further, That in the event of disagreement, any question of unreasonable interference shall be determined by the Commission after notice and opportunity for hearing.

Article 30. If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

Article 31. The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

Article 32. The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

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Twin Falls Hydro Associates, L.P.

Project No. 4885-029  
Washington

ORDER APPROVING AS-BUILT EXHIBITS AND REVISING ANNUAL CHARGES  
( Issued October 26, 1992 )

Twin Falls Hydro Associates, L.P., licensee for the Twin Falls Project, FERC No. 4885, filed as-built exhibits A, F, and G for approval on September 10, 1990, and supplemented these exhibits on October 4, 1991. The licensee submitted the exhibits in compliance with article 46 of the license.<sup>1</sup>

Project Features

The as-built exhibits show minor changes to the physical configuration of the project's structures. In particular, the exhibit A reveals higher project generating and hydraulic capacities than those authorized in the license. The details of the capacities are as follows:

Total Capacity	License	As-Built Exhibits
Hydraulic (cfs)	610	710
Generating (kW)	20,000	24,000

The exhibits also indicate that the project boundary includes 6.0 acres of federal lands. The licensed exhibit G drawing shows 3.24 acres of federal lands are within the project boundary. The increase is due to the licensee revising the project features by constructing the intake structure and powerhouse underground (beneath federal lands). The Commission approved the revised location of these features in the March 4, 1988, Order Approving Revised Exhibit F Drawings.<sup>2</sup>

The Commission issued a public notice concerning the increase in generating and hydraulic capacities on June 18, 1992. The U.S. Department of the Interior, in a letter dated July 30, 1992, stated that they have no objection to the amendment. There were no other comments, motions to intervene, or objections.

Summary of Findings

The Commission staff finds that the amendment of project to allow the 100 cfs increase in hydraulic capacity and the 4 MW increase in generating capacity would not significantly affect the fishery resources because of the following existing mitigative measures:

- Long-term minimum flows of 75 cfs from August 1 through April 30, and 150 cfs from May 1 through July 31, for the project's 1-mile-long bypassed reach.<sup>3</sup>
- Ramping rates from the river downstream of the tailrace.<sup>4</sup>
- Intake fish screens, a fish bypass system, and a tailrace barrier which protect fishery resources.

These mitigative measures would protect the fishery resources under the proposed amended capacity. Therefore, the change in capacity would not result in environmental impacts significantly different than those evaluated in the environmental assessment (EA) issued for the project on January 31, 1985.<sup>5</sup> The conclusion reached by the EA, that construction and operation of the project would not constitute a major federal action significantly affecting the quality of the human environment, remains valid for the project as amended by this order.

This order will change the installed capacity of the Twins Falls Project from 20,000 kW to 24,000 kW (32,000 horsepower equivalent). The licensee shall pay the revised annual charges effective May 1, 1985 (the first day of the month in which the Commission issued the license). The change in capacity does not materially affect the Commission's determination that the Twin Falls Project is best adapted to a comprehensive plan for the waterway.

<sup>3</sup> 59 FERC ¶62,258, issued June 10, 1992.

<sup>4</sup> 60 FERC ¶62,007, issued July 7, 1992.

<sup>5</sup> Environmental Assessment, Twin Falls Hydroelectric Project, FERC No. 4885-003--Washington, Office of Hydropower Licensing, Federal Energy Regulatory Commission, January 31, 1985. This document is available in the Commission's public files associated with this proceeding.

<sup>1</sup> 31 FERC ¶61,151, issued May 6, 1985.

<sup>2</sup> 42 FERC ¶62,195.

**The Director orders:**

(A) The following exhibits conform to the Commission's rules and regulations. They are approved and made part of the license, superseding the existing exhibits:

Exhibit A - Pages 1 through 12 of the exhibit entitled "Exhibit A - Project Description," filed on September 10, 1990.

Exhibit	FERC No.	Title	Superseding
F-1(a)	4885-45	Overall Site Plan	4885-34, 35
F-2	4885-46	Development Scheme at Intake Area	4885-36
F-3(a)	4885-47	Project Profile	4885-37
F-3(b)	4885-48	Tunnel Profile	4885-38
F-3(c)	4885-49	Intake Profile	4885-39
F-3(d)	4885-50	Tunnel Profile	4885-40
F-4	4885-51	Powerhouse Plan General Layout	4885-41
F-6	4885-52	Substation	4885-42
F-7(a)	4885-53	Single Line Diagram	4885-43
F-7(b)	4885-54	Single Line Diagram	4885-43
F-8	4885-55	Adjustable Steel Weir Details	4885-44
G-1	4885-56	Project Boundary Map	4885-11
G-2	4885-57	Project Boundary Map	4885-11

(B) The superseded exhibit F and G drawings are eliminated from the license.

(C) The project description in ordering paragraph (B)(2) of the license is revised to read as follows:

(2) Project works consisting of: (a) a 65-foot-long, 9.9-foot-high collapsible steel weir which will normally maintain the water surface elevation at 1082.5 feet msl; (b) an intake structure, with a submerged entrance, housing fish screens that protect two vertical intake shafts; (c) two 450-foot-long, 8-foot-diameter, concrete-lined vertical intake shafts, conveying water to the powerhouse caverns; (d) a 2,740-foot-long access tunnel; (e) two powerhouse caverns, located 514 feet below grade, each housing a 12,000-kW generating unit, for a total installed capacity of 24,000 kW; (f) a 3,820-foot-long outlet tunnel; (g) a three phase 20/26.7 MVA transformer; (h) two 11.8-kV transmission lines extending underground from the powerhouse to the project's switchyard; and (i) appurtenant facilities.

(D) Article 47 of the license is revised to read as follows:

Article 47. The licensee shall pay the United States the following annual charge, effective May 1, 1985 (the first day of the month in which the Commission issued the license):

a. For the purpose of reimbursing the United States for the cost of administration of Part I of the Act, a reasonable amount as determined in accordance with the provisions of the Commissions guidelines in effect from time to time. The authorized installed capacity for that purpose is 32,000 horsepower.

b. For the purpose of recompensing the United States for the use, occupancy, and enjoyment of 6.0 acres of its lands, an amount determined by the Commission, in accordance with its regulations, in effect from time to time.

(E) Within 90 days of the date of issuance of this order, the licensee shall file an original of the approved exhibit F & G drawings reproduced on silver or gelatin 35mm microfilm mounted on a Type D (3 1/4" x 7 3/8") aperture card for each drawing. In addition, the licensee shall file three Diazo-type duplicate aperture cards for each drawing. The original set and one duplicate set of aperture cards should be filed with the Secretary of the Commission. A duplicate set of aperture cards should be filed with the Commission's Portland Regional Office. The remaining duplicate set of aperture cards should be filed with the Bureau of Land Management's Washington State Office.<sup>6</sup> The FERC drawing number (4885-45 through 4885-57) shall be shown

<sup>6</sup> The Bureau of Land Management's office for Washington and Oregon is located at the following address:

Oregon State Office  
Bureau of Land Management  
Lands and Minerals Adjudication  
Section (OR-943.3)  
Attn: FERC Withdrawal Recordation  
P.O. Box 2965  
Portland, OR 97208

in the margin below the title block of the microfilmed drawing and also in the upper right corner of each aperture card. The top line of the aperture card shall show the FERC exhibit (e.g., F-1(a) through G-2), Project Number, Drawing Title, and the date of this order.

(F) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. §385.713.

  
J. Mark Robinson  
Director, Division of Project  
Compliance and Administration

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, D.C. 20426

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OLYMPIA, WA 98504-1091



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UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Twin Falls Hydro Company, Inc.

Project No. 4885-03  
Washington

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## ORDER APPROVING RAMPING RATES

( Issued July 7, 1992 )

On September 16, 1991, Twin Falls Hydro Company, Inc. (licensee) filed downramping study results and ramping rate recommendations under article 36 of the license for the Twin Falls Project, FERC No. 4885. Article 36 requires that the licensee, after consultation with the Washington Department of Wildlife (WDW), the U.S. Fish and Wildlife Service (FWS), and the Tulalip Tribes (Tribes), conduct studies to determine a ramping rate needed at the Twin Falls Project to ensure protection of downstream fish resources.

The licensee was required to complete the study within 6 months of commencement of project operations and file a report on the results of the study, and for Commission approval, recommendations for a ramping rate. The licensee has been required to operate the project maintaining a maximum interim ramping rate of 1 foot per hour (ft/hr).<sup>1</sup>

Background

The Twin Falls Project is located in King County, Washington, on the South Fork Snoqualmie River, between river miles 11.3 and 10.2. This run-of-river project consists of a 9.9-foot-high diversion weir, a 150-foot-long intake channel, an intake structure, a 2,740-foot long tunnel/penstock, a powerhouse containing 2 generating units each rated at 12 megawatts, a 3,820-foot-long outlet tunnel, a 1.1-mile-long bypassed reach, and appurtenant facilities.

Ramping rate study

To determine the effect of the project's startup and shutdown on changes to downstream water levels, the licensee monitored river stage at 1 study site within the bypassed reach (located 0.9 miles downstream of the diversion weir) and 2 sites below the tailrace (located 0.25 and 0.5 miles downstream) during project operation using ramping rates of 1.0 and 0.72 ft/hr. Site number 3 (0.5 miles below the tailrace) consisted of gravel bars and represented areas that would cause the greatest potential for fry stranding. The resulting measured changes in downstream river stage at the 3 sites varied from 0.28 to

-2-

0.83 ft/hr. These data indicate that, when the maximum ramping rate at the project is 1 ft/hr, the downstream changes in river stage are maintained less than the interim ramping rate requirement of 1 ft/hr.

Licensee's ramping rate recommendations

The licensee recommended that the maximum ramping rates at the Twin Falls Project be based on study site number 3 because this site represents a biologically sensitive site downstream of the project. In addition the licensee indicated that the U.S. Geological Survey maintains a gage at this location, and the gage can be used to verify maintenance of the established ramping rate. Based on the results of the ramping rate study at this site, the licensee proposed to limit ramping rates from October 1 through April 30 to 1 ft/hr and from May 1 through September 30 to 0.5 ft/hr.

Agency comments

The licensee consulted with the WDW, the FWS, and the Tribes in developing the study plan, and provided the results of the study and recommendations to these agencies in a letter dated April 17, 1991. These agencies didn't comment on the results or the licensee's recommendations.

However, in a letter dated September 4, 1991, the Washington Department of Fisheries (WDF) said that if salmon are introduced above Snoqualmie Falls, the licensee's proposed ramping rates wouldn't protect salmon fry from stranding. When and if salmon are introduced above Snoqualmie Falls, the WDF recommends a ramping rate of 2 inches per hour or the minimum possible mechanical ramping rate, whichever is greater. The WDF recommends that, if possible, no ramping should occur during daylight hours from February 16 through June 15 when salmon fry emerge from the gravel and are especially vulnerable to stranding.

Discussion

The licensee's ramping rate recommendations are more restrictive from May 1 through September 30 than from October 1 through April 30. Rainbow and cutthroat trout fry emerge from the gravel and are most vulnerable to stranding from June through August. Therefore, a more restrictive ramping rate during this period would protect trout fry from stranding. Restricting the ramping rate during the 1 month before and after this period ensures that early and late emerging fry are also protected.

<sup>1</sup> Order on rehearing, issued July 5, 1985.

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UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

South Fork Resources, Inc.

Project No. 4885-022  
Washington

ORDER APPROVING INTAKE FISH SCREENS  
AND FISH BYPASS SYSTEM DESIGN

( Issued August 30, 1989 )

On April 24, 1989, South Fork Resources, Inc. (licensee) filed functional design drawings and a construction schedule for intake fish screens and the fish bypass system at the Twin Falls Hydroelectric Project. The filing was supplemented on July 25, 1989, and the construction schedule was revised by letter dated August 3, 1989.

The Washington Department of Wildlife (WDW) and the U.S. Fish and Wildlife Service (USFWS) commented on the designs by letters dated December 19, 1988, and January 10, 1989, respectively. Agency comments have been incorporated into the designs.

Functional design drawings for the tailrace fish rack, as required by article 38 of the license, will be submitted in the near future. Because of construction deadlines, the licensee has requested separate approval for the intake fish screens and fish bypass system. To ensure timely compliance with article 38, the licensee should be required to submit design drawings for the tailrace fish rack, together with agency comments on the proposed designs, by October 1, 1989.

The proposed fish screens and bypass system will minimize the risk of harm to resident fish by preventing entrainment and subsequent mortality. The proposed construction schedule is adequate.

The Director orders:

(A) The functional design drawings of the intake fish screens and fish bypass system submitted with the licensee's April 24, 1989, filing, as supplemented on July 25, and August 3, 1989, are approved.

(B) The licensee shall file the functional design drawings of the tailrace fish rack for Commission approval by October 1, 1989. Comments from the Washington Department of Wildlife and the U.S. Fish and Wildlife Service shall be included in the filing.

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-2-

(C) The licensee shall file as-built drawings of the screens, bypass system, and fish rack with the Commission within 180 days of completion of project construction.

(D) This order is issued under authority delegated to the Director and is final unless appealed to the Commission under rule 1902 within 30 days from the date of this order.

*J. Mark Robinson*  
fr J. Mark Robinson  
Director, Division of Project  
Compliance and Administration

O. Ingram  
9-6-89



UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Twin Falls Hydro Company, Inc.

Project No. 4885-033,  
& -034  
Washington

## ORDER ESTABLISHING LONG-TERM MINIMUM FLOW RELEASE

( Issued June 10, 1992 )

On February 18, 1992, the Twin Falls Hydro Company, Inc. (licensee) filed a final report on the results of implementing an aquatic mitigation plan. On March 16, 1992, the licensee filed recommendations for a long-term minimum flow release. Both filings were made pursuant to article 37 of the project's license. Article 37 requires the licensee to implement fishery habitat enhancement and fishery monitoring studies, and to file for Commission approval, recommendations for long-term minimum flows in the project's bypassed reach based on the fishery studies. The licensee must consult with the Tulalip Tribes (Tribes) of Washington, the Washington Department of Game, and the U.S. Fish and Wildlife Service (FWS) before filing the report and long-term minimum flow recommendation.

Article 35 requires the licensee to release interim minimum flows, or project inflows, whichever is less, as follows: 75 cubic feet per second (cfs) from August 1 through April, and 150 cfs from May 1 through July.

**Background**

The Twin Falls Project is located on the South Fork of the Snoqualmie River and is operated in a run-of-river mode. The project consists of a 6 foot-high diversion structure, a 200 foot-long intake structure, a 4,560 foot-long penstock, and a 1 mile-long bypassed reach.

In the license issued for the project 1/, the Commission concurred with the licensee and the resource agencies that adequate protection of spawning habitat of resident mountain whitefish and cutthroat and rainbow trout would occur with the interim minimum flow schedule required by license article 35. In addition, the licensee proposed a 5 year fishery habitat monitoring plan of the trout populations in the bypassed reach and in an enhancement reach. This proposal was required as part of the fisheries studies identified in license article 37.

1/ 31 FERC ¶ 61,151 Order Issuing Major License, Denying Competing Preliminary Permit Applications, Granting Motions to Intervene, Denying Motions for Coordination of Proceedings and for Hearing, and Granting Waiver.

The agencies and the licensee had further agreed that, following commencement of project operation, if the fishery monitoring studies indicated the combined trout populations of the bypassed and enhancement reaches experienced a net-increase over pre-project levels, a year-round release of 75 cfs would be considered. Similarly, the Commission stated that if the trout population in the South Fork of Snoqualmie River were found to be greater than pre-project levels, a final year-round minimum flow of 75 cfs may be justified. The license indicated that the objective of the fish monitoring study was to determine whether an increase in the number of trout in an offsite stream (i.e., enhancement reach) could mitigate for possible reductions in trout populations in the bypassed reach.

**Licensee Filings**

The licensee conducted pre-project monitoring of fish populations in the bypassed and enhancement reaches for a five year period from June 1984 through September 1988. Boulders were placed in the enhancement reach during the fall of 1988 and the project began operating in December 1989. The post-project fish population monitoring of the reaches was conducted during 1990 and 1991. The fish population monitoring consisted of several snorkeling and one electrofishing survey each year to estimate the annual trout population.

The Aquatic Mitigation Plan dated May 15, 1984, called for 3 years of monitoring the trout populations in 5 sections of the South Fork either before project operation or the enhancement measures were taken. The licensee estimated the trout populations for the following five sections of the river: a control section; the bypassed reach; two sections of the enhancement reach; and in the impoundment above the diversion dam. The licensee monitored a control reach to have an index of the trout population in the unaffected stretches of river. The licensee also monitored the stretch of river that the project impounded. The licensee averaged the population estimates obtained, and used the averages in standard statistical tests to illustrate the changes within the river sections over time.

The results of the study are shown in Table 1. The enhancement reach populations are composites of snorkeling and electrofishing surveys. The control and bypassed reach and the diversion impoundment population estimates are only from the snorkeling surveys. The control section was not used to test the hypothesis after the licensee determined that it was not a good index of the river's trout population. The determination was based on the low correlation of the pre-project data of the control to some of the other river sections.

Table 1: Pre- and Post-project Trout Population Estimates

Monitored Section	Pre-project Trout Numbers (# trout/100 ft. of stream)	Post-project Trout Numbers (# trout/100 ft. of stream)
Control Reach	17.9	36
Impoundment	25.5	8.2
Bypassed Reach	31.3	26
Upper Enhancement Section	1.2	2.3
Lower Enhancement Section	4.4	4.8

The licensee concluded that because there was no significant net-loss of trout <sup>2/</sup> in the monitored river sections, the minimum flow requirement should be established at 75 cfs, year-round. In addition, the licensee proposes to monitor the trout populations in the 5 sections for an additional three year period. The licensee contends that the additional monitoring would confirm whether there is a loss of trout due to the 75 cfs minimum flow. If trout losses are shown, the licensee would increase the minimum flow back to a maximum of 150 cfs and mitigate for the losses suffered.

The licensee provided the following reasons to support its proposal to reduce the minimum flow in the bypassed reach to 75 cfs, year-round.

First, the licensee stated that the enhancement reach received greater fishing pressure than the other reaches and the original plan assumed equal fishing pressure between the monitored reaches. The licensee attributed the low trout numbers observed in the enhancement reach to the "increased" fishing pressure.

<sup>2/</sup> "No significant net-loss of trout" means that although the population appears to have declined in the bypassed reach and the impoundment, the sections of river directly affected by project operation, the decline was not statistically significant.

Second, the licensee indicated that the trout population did not experience a significant reduction in the bypassed reach after commencement of project operation, reducing the flows from natural to 150 cfs.

Finally, the licensee stated that the agencies did not advance any evidence that reducing the bypass flow to 75 cfs year-round would adversely effect the trout population in the bypassed reach.

#### Agency Comments

In letters respectively dated March 5 and March 13, 1992, the FWS, and the Washington Department of Wildlife (WDW) both commented on the licensee's final report and the long-term minimum flow proposal. The FWS stated that a statistically significant increase in numbers of trout in the enhancement reach alone would allow a reduction of the minimum flow. The FWS stated, however, that a reduction of flows would be inappropriate because such an increase in trout populations in the enhancement reach was not demonstrated. The WDW commented that the licensee did not provide any data affirming that fishing pressure in the enhancement reach was higher than the other reaches nor that the fishing pressure increased over the course of the study. The Tribes did not comment on the licensee's fishery study report or the long-term minimum flow proposal.

#### Conclusions

As stated in the license, the objective of the fish monitoring study was to determine if an increase in the adult trout population of the enhancement reach could mitigate for possible reductions of trout population in the bypassed reach. The licensee only attempted to show no net-loss of trout in the combined bypassed and enhancement reaches after the project began operation, which is not consistent with the requirements of the license. The licensee has followed this erroneous objective in reviewing the collected trout population data.

The enhancement reach is located in a catch-and-release stretch of the South Fork of the Snoqualmie River. Therefore, the licensee's claim that fishing pressure caused a reduction of the trout population is contrary to the management method being enforced on that river section. The licensee also identified other problems associated with aquatic habitat and the trout community in the enhancement reach that could limit fish size or cause large fish to move to other sections of the river. However, the licensee has provided no conclusive evidence that these factors were important to the trout population estimates obtained in the enhancement reach.

The Commission's staff analyzed the collected trout population data, before and after project operation and enhancement measures, per 100 feet of stream, within a study reach.<sup>1/</sup> The staff analyzed the snorkeling data separately from the electrofishing data because of the distinct and inherent biases that affect final population estimates when using the different sampling method. The staff also analyzed the correlation of the pre-project data from all of the monitored reaches and did not find sufficient cause to discard the control reach. Therefore, the staff analyzed the control reach because it represents a section of river unaffected by either project operations or enhancement measures.

The results of our statistical analysis of pre- and post-project adult trout population numbers obtained by electrofishing showed a statistically significant gain of adult trout in the control section, and no significant change in the bypassed reach and the enhancement reach. The pre- and post-project adult trout population numbers obtained by snorkeling also showed a gain of trout in the control section and no statistically significant change in the bypassed reach and the enhancement reach.

The license for the project requires that, for any consideration of lowering the minimum flow requirement in the bypassed reach, the combined trout population of the bypassed and enhancement reaches must have experienced a net-increase. The results of the licensee's fish monitoring studies clearly shows that the combined trout populations did not increase. The licensee's long-term minimum flow proposal, filed on March 16, 1992, should be denied.

The information provided by the licensee indicates that the interim minimum flow required by article 35, should be made the long-term minimum flow, as required in article 37. The current minimum flow requirements are adequately maintaining the adult trout population and there is no biological justification for reducing the flows. Therefore, article 35 should be revised to reflect the minimum flow requirements as the long-term flow

- 1/ The staff used a confidence level of 90% to test if the Pre- and Post- trout population means were equal ( $\mu_1 = \mu_2$ ). The variances of  $\mu_1$  and  $\mu_2$  were tested for equality using an F test at a 95% confidence level. If the variances were statistically equal we used a student t test. If the variances were not equal we used a Fisher-Behrens student t, also at a 90 % confidence level to prevent a false hypothesis from being accepted when it should be rejected. The licensee's sampling regime caused the degrees of freedom for each test to be different.

requirements. Should further information be collected on the impacts of the project or the effectiveness of the enhancement reach on the adult trout population, the licensee may present this information to the Commission and request a review of the long-term minimum flows.


The Director orders:

(A) The long term minimum flow proposal, filed on March 16, 1992, pursuant to Article 37, is denied.

(B) Article 35 of Ordering Paragraph (G) of the order issuing a license for the Twin Falls Hydro Project is amended to read as follows:

Article 35. Licensee shall discharge from the Twin Falls Project diversion weir the following continuous minimum flows, or the inflow to the project, whichever is less, for the protection of aquatic resources in the South Fork Snoqualmie River: (a) 75 cubic feet per second (cfs) from August 1 through April 30; and (b) 150 cfs from May 1 through July 31. The minimum flows may be temporarily modified if required by operating emergencies beyond the control of the licensee and for short periods upon mutual agreement between the licensee, the joint agencies, and the Washington State Department of Game.

(C) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days from the date of issuance of this order, pursuant to 18 C.F.R. §385.713.

  
J. Mark Robinson  
Director, Division of Project  
Compliance and Administration

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, D.C. 20426

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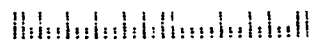


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OLYMPIA, WA 98504-1021



UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Twin Falls Hydro Associates

Project No. 4885-026  
Washington

ORDER APPROVING TAILRACE BARRIER DESIGN

( Issued July 23, 1990 )

On January 3, 1990, Twin Falls Hydro Associates (licensee) filed functional design drawings for a tailrace barrier at the Twin Falls Hydroelectric Project (FERC No. 4885) as required by article 38 of the project's license. The filing was supplemented on February 9, 1990.

The tailrace barrier will consist of a series of half-inch steel chains suspended from a steel frame in the project's tailrace tunnel. By letters dated November 2, 1989, the licensee requested agency and tribal comments on the design, but received no response.

The proposed tailrace barrier should minimize the risk of harm to resident fish by preventing their entrance to the tailrace tunnel, thereby avoiding the risk of turbine injury.

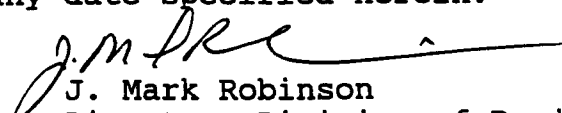
If information becomes available indicating that the proposed tailrace barrier does not provide adequate protection for fish populations downstream of the project, the Commission should reserve the right to require changes in project structures or operations to minimize potential harm to fisheries resources.

The Director orders:

(A) The functional design drawings of the tailrace barrier submitted with the licensee's January 3, 1990, filing, as supplemented on February 9, 1990, are approved.

(B) If information becomes available indicating that the proposed tailrace barrier does not provide adequate protection for fish populations downstream of the project, the Commission reserves the right to require changes in project structures or operations to minimize potential harm to fisheries resources.

(C) This order is issued under authority delegated to the Director pursuant to section 375.314 of the Commission's regulations. Section 385.1902 of the Commission's regulations provides 30 days from the date of this order for an appeal to the Commission of this action. Filing an appeal does not stay the effective date of this order or any date specified herein.

  
J. Mark Robinson  
Director, Division of Project  
Compliance and Administration

JUL 15 1985

Project Nos. 4885-005, -006 -2-

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSIONLICENSE  
REHEARINGBefore Commissioners: Raymond J. O'Connor, Chairman;  
Georgiana Sheldon, A. G. Sousa  
and Charles G. Stalon.

South Fork Resources, Inc. )

Project Nos. 4885-005  
and 006

## ORDER ON REHEARING

(Issued July 5, 1985)

On June 5, 1985, two requests for rehearing were filed seeking rehearing of the Commission's May 6, 1985 order issuing a license to South Fork Resources, Inc. (South Fork) to construct, operate and maintain the Twin Falls Project No. 4885. 1/ The first request for rehearing was filed jointly by the Washington State Department of Fisheries, the Washington State Department of Game (WDG), the Tulalip Tribes of Washington (Tribes), the United States Fish and Wildlife Service, the National Marine Fisheries Service (NMFS) (all hereinafter referred to as the "joint agencies") and South Fork. The second request for rehearing was filed by South Fork at the request of the Washington State Parks and Recreation Commission (WP&RC) 2/ and the National Park Service (NPS).

The first request for rehearing -- that filed by the joint agencies and South Fork -- requests that the Commission make several changes in the license order for the project. They request that we: (1) modify the text of the order to correct what they perceive to be a misstatement regarding to loss of some fishery habitat in the bypassed reach as a result of reduced flows; (2) modify Ordering Paragraph (F) of the license to incorporate into the license a certain portion of South Fork's Environmental Report; (3) make certain revisions in Articles 33 through 36, 40, and 49 of the license; and (4) add an additional Article 50 to the license.

1/ Order Issuing Major License, Denying Competing Preliminary Permit Applications, Granting Motions to Intervene, Denying Motions for Coordination of Proceedings and for Hearing, and Granting Waiver, 31 FERC ¶ 61,151 (May 6, 1985).

2/ WP&RC's motion for late intervention in this proceeding, which was filed with the Commission on April 24, 1985, was denied by Notice Denying Late Intervention issued May 17, 1985.

The second request for rehearing -- that filed by South Fork at the request of WP&RC and NPS -- requests that: (1) certain portions of the text of the order be modified to indicate that the Olallie State Park, upon which a portion of the project lands is located, presently exists as a Washington State Park; and (2) a footnote which South Fork asserts is inaccurate be deleted from the text of the order. Finally, South Fork requests that a new article be added to the license that would require South Fork, after consultation with WP&RC, NPS, and other interested agencies and entities, to prepare and file for approval with the Commission within two years from the date of issuance of the license and prior to commencement of construction activities a revised Report on Recreational Resources.

As explained below, we are not approving all of these requests for revisions. We have found, however, that the majority of the requested revisions are in the public interest and are approving them for incorporation into the license.

Changes in the Text of the Order

The joint agencies and South Fork request that the second sentence of the fourth paragraph of the section of the license order entitled "Instream Flows and Habitat Enhancement" be deleted from the order. That sentence reads as follows: "Although some fishery habitat will be lost in the bypassed reach as a result of reduced flows, the proposed off-site habitat enhancement will provide adequate compensation." 3/ The parties say this statement is erroneous because it has been determined that no such loss will occur with flows of 150 cfs in the bypass reach during the spawning period. Upon reconsideration we agree that the statement is erroneous. Therefore, the above-referenced sentence should be deemed superseded by our discussion herein.

South Fork, at the request of WP&RC and NPS, has requested that the order be revised to indicate that Olallie State Park is an existing Washington State Park, and not, as the license order indicated, 4/ a park yet to be created. Since South Fork's contention in this regard is correct, our previous statement should also be deemed superseded by our discussion herein. However, we will not grant South Fork's further request, also made at the request of WP&RC and NPS, that footnote 4 of the order be deleted. This footnote indicates that South Fork filed with the Commission the

3/ 31 FERC at 61,291.

4/ 31 FERC at 61,292.

comments and recommendations of WP&RC on July 13, 1982. South Fork says this statement is erroneous. The record, however, indicates that South Fork did file this material when and in the circumstances indicated in the footnote.

#### Environmental Report

In Ordering Paragraph (F) of the license order, 5/ we approved and made part of the license proposed measures to revegetate disturbed areas. South Fork and the joint agencies have requested that certain other measures agreed to by South Fork and the fish and wildlife agencies be included in the license. These measures, recited as Items (1) through (14) at pages E-36 and E-37 of South Fork's Environmental Report, filed with the Commission on July 13, 1982, spell out in great detail additional fish protection measures South Fork shall undertake. Since implementation of these measures will benefit fish resources at the project site, our approval of them would be in the public interest. Therefore, we are incorporating them into the license as project requirements as requested, except for Item 14, which we are not incorporating into the license since it purports to grant to the WDG the authority to establish a final ramping rate for the project in contravention of the provisions of Article 36 of the license. 6/

#### Article 33

Article 33 of the license presently requires South Fork, after consultation with a variety of agencies (not including NMFS) and the Tribes, to prepare a plan to control erosion, dust and slope stability and to minimize the quantity of sediment or other potential water pollutants resulting from the construction and operation of the project. Article 33 also establishes a formal procedure whereby the plan will be submitted to the agencies and the Tribes for review, comment and objection. Under this procedure, South Fork is required to file the plan with the Commission along with any comments and objections of the Tribes and agencies. Thereafter, and without further order of the Commission, South Fork is required to comply with the plan as filed unless changes are ordered by the Commission pursuant to authority reserved to the Commission by that article. 7/

5/ 31 FERC ¶ 61,151 at 61,295.

6/ See our discussion with regard to Article 36, infra.

7/ See 31 FERC at 61,295-96 for the text of Article 33 as included in the license.

South Fork and the joint agencies have requested that numerous changes be made to Article 33. With regard to the plan to control erosion, dust, slope stability, and sedimentation (which they have requested be called the "pollution control plan") they request that Article 33 be modified so that: (1) NMFS be among the agencies consulted; (2) all recommendations of the Dunne Study, 8/ including its major recommendations for erosion control as specified in Attachment A to the parties' joint rehearing request and which is attached to this order also as Attachment A, be made project requirements for the construction, operation and maintenance of the project and specifically be made part of the license; (3) disputes regarding the proper implementation of the Dunne Study recommendations shall be resolved by South Fork and the joint agencies; (4) if they fail to resolve any such disputes, they must be resolved by Commission order; and (5) following the filing of the plan with the Commission pursuant to the procedures embodied in the existing Article 33, if disputes over the adequacy of the plan remain and cannot be resolved by unanimous agreement of South Fork, the joint agencies and the other agencies specified in Article 33, then any entity may refer the matter to the Commission for resolution. With regard to this last point, they also request that Article 33 provide that until the Commission resolves any such matter submitted to it, South Fork may not begin construction of the project.

We have reviewed the requested changes in Article 33 as they relate to the plan to control erosion, dust, slope stability, and sedimentation and have determined that it would be in the public interest to approve many of them since they will facilitate better interaction of the parties and more prompt resolution of any disputes which may arise. Specifically, we are approving hereinafter the designation of this plan as the "pollution control plan"; the addition of NMFS to the group of entities that must be consulted by South Fork in its preparation of the plan; the designation of the major recommendations for erosion control of the Dunne Study as specified in Attachment A hereof as requirements for the construction, operation and maintenance of the project; 9/ and the requirement that South Fork and the consulted agencies 10/ work to resolve disputes regarding the proper implementation of those

8/ See 31 FERC at 61,300 n. 4 for the complete title of the Dunne Study.

9/ We accomplish this not by specifically stating that the major recommendations of the Dunne Study are to be project requirements but, rather, by requiring that those recommendations be made a part of the pollution control plan and that South Fork comply with the plan.

10/ See n. 14, infra.

recommendations. We are not, however, approving their request that all of the recommendations of the Dunne Study (i.e., those in addition to those specified in Attachment A) be made project requirements. We are declining to do so since we have reexamined the Dunne Study and have determined that it is not entirely clear which portions of it should be considered as constituting the remaining recommendations of the study. We believe that if we were to amend Article 33 to require compliance with all of the Dunne Study recommendations, this ambiguity could lead to uncertainty with regard to the actual requirements of Article 33 and, thus, could pose a threat to the harmonious working relationship South Fork has developed with the joint agencies. We believe that the public interest would be better served by making the major recommendations of the Dunne Study binding on South Fork but providing it and the consulted agencies with the flexibility to determine the most appropriate way to successfully implement those major recommendations.

We are also not approving South Fork's and the joint agencies' requests that disputes regarding the proper implementation of the Dunne Study be resolved by Commission order if the parties fail to resolve them and that if any dispute remains regarding the adequacy of the plan following the filing of the pollution control plan with the Commission and the matter is referred to the Commission, construction of the project cannot begin until the Commission has resolved the dispute. We are not approving these related requests because they could, by requiring the Commission to take administrative action to decide all objections to South Fork's interpretation of what constitutes proper implementation of the Dunne Study recommendations 11/ and other aspects of the plan, including those without merit, unnecessarily delay construction of the project. Furthermore, although the requested revisions do recognize the ultimate authority of the Commission to determine when and how the project should be constructed, 12/ they would vest in the agencies to be consulted

11/ It is unclear from the language of the requested revisions if South Fork and the joint agencies are requesting that the Commission resolve disputes over the proper implementation of the Dunne Study recommendations before the pollution control plan is filed with the Commission or if they want those disputes to be resolved under their requested post-filing procedures. However, our determination that it would be inappropriate to approve their requests in this regard is applicable to both interpretations.

12/ As discussed in detail in the license order, South Fork and the Tribes had requested that the Commission approve an agreement between themselves regarding the project. We declined to

(FOOTNOTE 12 CONTINUED ON FOLLOWING PAGE)

pursuant to Article 33 the authority to halt, at least temporarily, construction of the project. We believe that once a license for a project is issued by us, the authority to delay construction of the project--even temporarily--because of disputes over the adequacy of a plan required to be prepared by us as part of the license resides with the Commission and, therefore, should not be delegated to other entities. Consequently, we cannot approve these requested revisions.

In lieu of the revisions requested by South Fork and the joint agencies regarding Commission resolution of disputes over the proper implementation of the Dunne Study recommendations and the adequacy of the pollution control plan, we are revising Article 33 of the license to provide that if any of the agencies to be consulted under that article state any objections to the pollution control plan either before or within 10 days after their receipt of the plan for formal review, South Fork, instead of forwarding the plan to the Commission along with the objections, shall promptly, and in good faith, attempt to resolve the dispute to the mutual satisfaction of itself, the objecting entity and the other consulted agencies. If the matter is resolved, the revised Article 33 would require South Fork to modify the plan accordingly before filing it with the Commission. If the matter is not resolved, under the revised Article 33 South Fork would file the plan with the Commission along with the objections and written documentation of its attempt to resolve the matter. In such cases, all of the consulted agencies would have the opportunity to submit additional comments to the Commission on the disputed issue. To ensure that this dispute resolution procedure is expeditiously carried out, the revised Article 33 places a 20-day limit on South Fork's filing of the pollution control plan and related documents with the Commission. Also, and in accordance with our discussion herein and in the license order regarding the inappropriateness of giving agencies the authority to delay construction of a project the revised Article 33 -- like the original Article 33 -- does not prevent South Fork from beginning construction of the project

(FOOTNOTE 12 CONTINUED FROM PREVIOUS PAGE)

approve the agreement since it would have impermissibly granted to the Tribes the authority to determine if and how the project should be constructed and operated. See 31 F.R.R. at 61,290. In their joint request for rehearing, South Fork and the joint agencies state that the aforementioned agreement was not intended to vest such authority in the Tribes. See joint rehearing request at 3. Their requested revision to Article 33 specifying that the Commission resolve any dispute over the adequacy of the plan apparently was intended to clarify this point.



if an agency raises an objection to it. The revised Article 33 makes clear, however, that the Commission has the authority to direct changes in the plan in response to any unresolved objection or for any other appropriate reason. Finally, the revised Article 33 clarifies an ambiguity in the parties' request 13/ by specifying that disputes over the proper implementation of the major recommendations of the Dunne Study shall be subject to the same dispute resolution mechanism applicable to all other objections to the plan under the revised Article 33. 14/

Although not incorporating the requested provision prohibiting South Fork from commencing construction of the project until the Commission resolves all disputes and objections regarding the pollution control plan referred to it, we believe the procedures established by our revised Article 33 will force South Fork to accommodate all legitimate objections to the plan and will discourage the consulted agencies from advancing unjustified objections. In addition, the provisions requiring South Fork to document its attempts to resolve disputes when resolution has not been obtained and allowing the filing of additional comments by the consulted agencies in such cases will enable the Commission to promptly decide if South Fork had proceeded in good faith and if the pollution control plan should be modified in light of the objections. We believe that the procedures embodied in the revised Article 33, by putting the impetus to resolve disputes on both South Fork and the consulted agencies, will be in the public interest and will result in the attainment of the parties' primary purpose in advancing their requested revisions to Article 33 -- to encourage the parties to resolve among themselves any future disputes. 15/

13/ See n. 11, *supra*.

14/ In providing that disputes over the proper implementation of the Dunne Study recommendations are to be subject to the same dispute resolution mechanism as other objections, we are providing that disagreements in this regard can be raised by all of the agencies to be consulted under Article 33, not just by the joint agencies, as apparently requested by South Fork and the joint agencies. Inasmuch as all of the consulted agencies can object to all other aspects of the pollution control plan under our original and revised Article 33, and under the revisions requested by South Fork and the joint agencies, we believe it would be more appropriate if all of the agencies listed in Article 33 are able to raise objections regarding implementation of the Dunne Study recommendations.

15/ See joint rehearing request at 3.

South Fork and the joint agencies have also requested that Article 33 be revised to require South Fork to prepare construction and operation plans for the project. With regard to the construction plan, they request that it address all aspects of project construction as specified in Attachment B to their joint rehearing request, which is attached to this order also as Attachment B. 16/ As to the operation plan, they request that it include such things as ramping rates, minimum instream flows, and erosion and other pollution control measures that will ensure that no deleterious materials are discharged into the South Fork Snoqualmie River. In addition, they request that the operation plan provide for the monitoring and reporting of certain factors and the conducting of an initial and annual project operation demonstrations. Finally, they request that these plans be subject to the same objection procedures they have requested be made applicable to the pollution control plan. 17/

We have concluded that since the construction and operation plans are closely related to the pollution control plan and since their preparation will help ensure that the Twin Falls Project is constructed and operated in an environmentally sound manner, modification of Article 33 to incorporate generally the requested revisions with regard to them would be in the public interest. Accordingly, we are approving herein the requested revisions with the following modifications. First, we are requiring South Fork to engage in the same consultation process with regard to its preparation of these two plans as it is required to undertake in preparing the pollution control plan. Second, since there appears to be a certain degree of redundancy between the pollution control plan and the construction and operation plans, we are providing that matters addressed and described in the pollution control plan which relate to project construction or operation may be addressed in the latter two plans by appropriate reference to the pollution control plan. Third, we are specifying that the plans must be consistent with the provisions of all other articles of the plan and must reflect Commission determinations on such matters as ramping rates and fish screens. Fourth, and for the same reasons discussed

16/ Included in Attachment B are such things as requirements for the preparation of scale drawings of all pertinent project features, development of background and baseline data, and preparation of land acquisition plans and schedules.

17/ Specifically, South Fork and the joint agencies have requested that Article 33 be revised so that if the consulted agencies have any objections to the construction or operation plans and the objections are referred to the Commission, South Fork cannot begin construction or operation until the Commission has resolved the objections.

previously with regard to the pollution control plan, we are not approving South Fork's and the joint agencies' request that these plans be made subject to the same objection procedures they have requested be made applicable to the pollution control plan. Instead, we are providing that they be subject to the same objection procedures we are making applicable to the pollution control plan under our revisions to Article 33 of the license. Finally, we are not approving as part of Article 33 their request that project operation demonstrations be included in the operation plan. As will be discussed next, however, we are approving with modifications their requests in this regard as part of Article 34 of the license since this latter article is the more appropriate place in which to lodge these provisions.

#### Article 34

Article 34 of the license presently requires South Fork to: allow representatives of the Tribes to inspect the project during its construction and operation; maintain and make available to the Tribes a record of project operations; and notify the Tribes of unusual occurrences. <sup>18/</sup> The joint agencies and South Fork have requested that this article be revised so that the other members of the joint agencies be afforded the same rights given to the Tribes under this article. Since this requested revision would facilitate agency oversight of the project, it would be in the public interest for us to approve it, and we are doing so herein.

As mentioned in the discussion of the Article 33 revisions, South Fork and the joint agencies have requested that the license be revised to require South Fork to conduct an initial and annual project operation demonstrations. Specifically, they have requested that: the first demonstration be held prior to the first sale of power; annual demonstrations be conducted within periods designated by the agencies specified in Article 33 of the license for every year that the project operates; the agencies be given prior notice of each demonstration; if the demonstrations disclose operation deficiencies violating the terms of the license the project may be shut down until the deficiencies are corrected; and the agencies be notified of such deficiencies and corrective measures.

We have reviewed the revisions requested by South Fork and the joint agencies and have determined that it would be in the public interest to approve most of them for the same reason we are approving their specific requests with regard to Article 34. We are not, however, approving their request that the project automatically be shut down if the demonstrations disclose operation

<sup>18/</sup> See 31 FERC at 61,296 for the text of Article 34 included in the license.

deficiencies violating the terms of the license. Pursuant to Section 4(g) of the Federal Power Act <sup>19/</sup> and Title III thereof, the Commission has wide discretion to determine the most appropriate means to respond to violations of license articles. While it may turn out in any particular instance that ordering the shutting down of the Twin Falls Project for a violation of the license disclosed during an operation demonstration would be the most appropriate Commission response, we cannot ignore the possibility that the public interest would be better served by our use of a different enforcement tool in other situations. <sup>20/</sup> If we were to approve their request to have the project automatically shut down for violations disclosed during the demonstrations, we would not be able to use the discretion vested in us by the Federal Power Act to respond properly to protect the public interest. This we decline to do.

In lieu of the requested revision calling for the shutting down of the project, we are approving herein an addition to Article 34 requiring South Fork to give the Commission prior notice of each demonstration so that Commission staff will have an opportunity to be present during the demonstrations. Also, this addition requires South Fork, if it receives written notification from any joint agency indicating that such agency believes a demonstration has revealed a license violation, to promptly forward such written notification to the Commission. We believe that these provisions, by promptly bringing license violations to the attention of the Commission, will better enable us expeditiously to fashion the most appropriate enforcement response.

#### Article 35

Article 35 of the license presently provides that the continuous minimum flows for the project may be modified for short periods upon mutual agreement of South Fork, the Washington State Department of Game, and the Tribes. <sup>21/</sup> South Fork and the joint agencies have requested that this article be revised to provide that such modification should occur upon the mutual agreement of South Fork, all of the joint agencies, and the Washington State

<sup>19/</sup> 16 U.S.C. § 797.

<sup>20/</sup> For example, because of energy shortages in the Pacific Northwest caused by the outage of other generating facilities, it may be more appropriate for the Twin Falls Project to continue operating while South Fork carries out appropriate mitigation measures.

<sup>21/</sup> See 31 FERC at 61,296 for the text of Article 35 included in the license.

Department of Ecology. We believe that this requested revision is in the public interest and are therefore approving it herein.

Article 36

Article 36 of the license presently requires South Fork, after consultation with the Washington State Department of Game, the Tribes, and the U.S. Fish and Wildlife Service, to conduct studies to determine an appropriate ramping rate for the project and to forward its recommendations on such to the Commission for approval. 22/ South Fork and the joint agencies have requested that Article 36 be revised to provide that pending determination of a final ramping rate by agreement of the joint agencies and the licensee or Commission order, the maximum ramping rate shall be 1 foot/hour.

We agree with the parties that Article 36 should be amended to provide for an interim maximum ramping rate of 1 foot/hour and are approving that revision herein. We are not, however, approving their requested revision granting to the entities specified in that article the authority to set the final ramping rate. As discussed previously in relation to the requested revisions to Article 33, we do not believe approval of such a request would be appropriate. In lieu thereof, and to ensure that all objections to the recommendations of South Fork are brought to our attention, we are requiring South Fork to submit its ramping rate studies and recommendations to the entities specified in Article 36 for formal review, objection, and submittal to the Commission in accordance with the procedures we are approving in Article 33 for the pollution control, construction and operation plans.

Article 40

Article 40 of the license presently requires South Fork, prior to the commencement of any future construction at the project, to: consult with the Washington State Historic Preservation Officer (SHPO) about the need for any cultural resources survey and salvage work; develop, in consultation with the SHPO, a mitigation plan for the protection of significant archeological or historical resources discovered during the course of construction; and make available reasonable amounts of funds for such work. 23/ South Fork and the joint agencies have requested that Article 40 be revised to include specifically Indian religious resources within the scope of that article and to have South Fork consult with the

22/ See 31 FERC at 61,296 for the text of Article 36 included in the license.

23/ See 31 FERC at 61,297 for the text of Article 40 included in the license.

Tribes in each instance Article 40 requires it to consult with the SHPO.

Our review of the requested revisions to Article 40 indicates that it would be in the public interest to modify that article generally as requested. Although we believe that the existing Article 40 already encompasses Indian religious resources, specifically identifying them as within the scope thereof will clarify this point. Also, we think it would be appropriate for the Tribes, with its intimate knowledge of its own religious resources, to be consulted when those resources may be affected by future construction at the project. Therefore, we are approving herein the requested changes, but are providing that the Tribes are to be consulted only with regard to Indian religious resources. 24/

Article 49

Article 49 of the license sets out the situations in which South Fork may grant permission for use and occupancy of project lands and waters and those where it can convey certain interests in project lands and waters without prior Commission approval. 25/ Paragraph (e) thereof, which is only applicable to conveyances of interests in lands, provides, *inter alia*, that before any such conveyance can be made, South Fork must: (1) consult with Federal and state fish and wildlife or recreation agencies as appropriate; (2) determine that the conveyance would not be inconsistent with recreational reports or exhibits; and (3) include covenants in the conveyances requiring the grantees to take all reasonable precautions to protect the scenic, recreational, and environmental values of the project.

South Fork and the joint agencies have requested that paragraph (e) of Article 49 be revised to: (1) make it also applicable to grants of permission for use and occupancy; (2) require consultation with tribal agencies; (3) require grantees and permittees to take all reasonable precautions to protect the scenic, recreational, and environmental values of the Snohomish River Basin; (4) require that conveyances and grants of permission to use and occupy project lands be consistent with the provisions of the

24/ Although we are approving the requested revisions to Article 40, we take no position on South Fork's and the joint agencies' contention that these revisions are required for compliance with the American Religious Freedom Act, 42 U.S.C. § 1996. See joint rehearing request at 7.

25/ See 31 FERC at 61,298-300 for the text of the Article 49 included in the license.

pollution control, construction, and operation plans to be prepared under Article 33 of the license; and 5) require that disputes regarding determinations of consistency with those plans be resolved through the dispute resolution provisions they have requested be included in Article 33 of the license.

We have reviewed the parties' requested revisions to paragraph (e) of Article 49 and have concluded that, because they will help ensure that future operations of the project will not adversely impact environmental and Indian resources, the first three revisions specified in the immediately preceding paragraph are in the public interest. Accordingly, we are approving them herein. As to the last two items specified in that paragraph, we believe it would be in the public interest to require all conveyances and grants of permission to use and occupy project lands to be consistent with the three plans required to be prepared pursuant to Article 33 of the license. For the reasons discussed previously, however, we believe that disputes regarding consistency determinations should not be resolved in accordance with the parties' requested revisions to Article 33, but, rather, in accordance with procedures similar to those we are approving for inclusion in that article. Therefore, we are approving herein appropriate revisions to paragraph (e) of Article 49.

#### Proposed Article 50

South Fork and the joint agencies have requested that a new Article 50 be added to the license specifying that if project modifications requiring approval pursuant to Section 10(b) of the Federal Power Act 26/ are proposed, the joint agencies be notified in writing of the proposed modifications and be given an opportunity to comment and object to such modifications. While we have determined that notification of the joint agencies and the providing to them of an opportunity to comment and object with regard to modifications requiring approval pursuant to Section 10(b) would

26/ 16 U.S.C. § 803(b). This section provides:

That except when emergency shall require for the protection of navigation, life, health, or property, no substantial alteration or addition not in conformity with the approved plans shall be made to any dam or other project works constructed hereunder of an installed capacity in excess of two thousand horsepower without the prior approval of the Commission; and any emergency alteration or addition so made shall thereafter be subject to such modification and change as the Commission may direct.

be in the public interest, we note that the provisions of Section 10(b) have generally been incorporated into Article 3 of Form L-2 which was made a part of the license for the Twin Falls Project by ordering paragraph (G) of the license order. Consequently, we will remove Article 3 of Form L-2 from the license, revise it to incorporate the changes requested by South Fork and the joint agencies in this regard, and reinsert it into the license as additional Article 50.

#### Proposed Article 51

South Fork, at the request of WP&RC and NPS, has requested that a new article be added to the license that would require South Fork, after consultation with WP&RC, NPS, and other interested agencies and entities, to prepare and file for approval with the Commission within two years from the date of issuance of the license and prior to commencement of construction activities a revised Report on Recreational Resources. We believe that this requested addition is in the public interest and we are therefore approving it herein.

#### The Commission orders:

(A) The requests for rehearing filed on June 5, 1985, in this proceeding by South Fork Resources, Inc., the Washington State Departments of Fisheries and Game, the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, and the Tulalip Tribes of Washington, and by South Fork Resources, Inc., at the request of the Washington State Parks and Recreation Commission and the National Park Service, are hereby granted in part and denied in part.

(B) Ordering paragraph (F) of the order issuing a license for the Twin Falls Project No. 4885 (31 PERC ¶ 61,151 (May 6, 1985)) is amended to read as follows:

(1) Proposed measures to revegetate disturbed areas, contained in the Report on Fish, Wildlife, and Botanical Resources (page E-34), filed on July 13, 1982, are approved and made a part of the license, except as modified by any license articles contained herein.

(2) Proposed measures to protect fishery resources, Items (1) through (13) on pages E-36 and E-37 of the license's Environmental Report, filed on July 13, 1982, are approved and made a part of the license, except as modified by any license articles contained herein.

(C) The first sentence of ordering paragraph (G) of the order issuing a license for the Twin Falls Project No. 4885 (31 PERC ¶ 61,151 (May 6, 1985)) is amended to read as follows:

Project Nos. 4885-005, -006 -15-

This license is also subject to the terms and conditions set forth in Articles 1, 2 and 4 through 32 set forth in Form L-2 (revised October, 1975), entitled "Terms and Conditions of License for Unconstructed Major Project Affecting Lands of the United States," attached to and made a part of this license.

(D) Articles 33, 34, 35, 36, and 40 of ordering paragraph (G) of the order issuing a license for the Twin Falls Project No. 4885 (31 FERC ¶ 61,151 (May 6, 1985)) are amended to read as follows:

Article 33. (A)(1) Licensee shall, after consultation with the Washington State Department of Ecology, the Washington State Department of Transportation, the Washington State Parks and Recreation Commission, the King County, Washington, Department of Planning and Community Development, the U.S. Soil Conservation Service, the U.S. Army Corps of Engineers, the Washington State Department of Fisheries, the Washington State Department of Game, the Tulalip Tribes, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service prepare a pollution control plan to control erosion, dust, and slope stability in all disturbed areas associated with the project, and to minimize the quantity of sediment or other potential water pollutants resulting from construction and operation of the project. The pollution control plan shall address, among other things, vegetation, design and location of sedimentation ponds, grading of slopes, control of surface drainage, measures to contain sediment or minimize the amount of sediment that would be generated during a break in the pipeline/penstock, temporary stockpiling of topsoil, storage and disposal of excess excavation and slide materials, and any construction or upgrading of access roads, including construction access. The pollution control plan shall also include a subplan for the removal of accumulated sediment from the project impoundment. The subplan shall address possible placement of the removed sediment downstream from the diversion weir, and shall also include, among other things: a description of the final disposition of the removed sediment, an implementation schedule that provides for normal maintenance sediment removal periods defined to minimize adverse impacts on fish spawning and rearing, and provisions for cooperation with, and notification of, the entities listed above prior to sediment removal operations. The pollution control plan shall also include: provisions for identifying and mapping of erosive soils and potentially unstable slopes; an implementation schedule for the provisions not related to the subplan; monitoring and maintenance programs for project construction and operation; provisions for periodic review of the pollution control plan and for making any necessary revisions to the pollution control plan; provisions for submitting to the Director, Office of Hydropower Licensing, the Commission's Regional Engineer, and to the entities listed above, periodic reports on the progress of all investigations,

implementation, monitoring, and maintenance accomplished under the pollution control plan during the period, and of work contemplated under the pollution control plan for the ensuing period; and documentation of consultation with the above entities during preparation of the pollution control plan.

(2) All major recommendations, as specified in Attachment A to the rehearing request filed with the Commission on June 5, 1985, with regard to this project, of the August, 1984 report by Thomas Dunne entitled "Effects of the Twin Falls and Weeks Falls Projects on Sedimentation along the Snoqualmie River System" and identified in n. 3 of 31 FERC ¶ 61,151 (1985) shall be incorporated into and made a part of the pollution control plan; provided, however, that the specific means for the proper implementation of those major recommendations shall be determined through the consultation required by paragraph (A)(1) hereof, and shall be included in the pollution control plan; provided, further, that the pollution control plan shall be consistent with the provisions of all other articles hereof. If the Licensee and the entities specified in paragraph (A)(1) hereof fail to resolve any disputes regarding the proper implementation of those major recommendations prior to the submittal of the pollution control plan to those entities for formal review pursuant to paragraph (A)(3) hereof, such disputes, if objections are raised, shall be subject to the provisions of paragraph (D) hereof.

(3) Within one year from the date of issuance of this license and at least 90 days prior to any ground disturbing activity or soil disposal at the project, the Licensee shall submit copies of the pollution control plan to the entities specified in paragraph (A)(1) hereof for formal review.

(B)(1) Licensee shall, after consultation with the entities specified in paragraph (A)(1) hereof, prepare a detailed construction plan for the project. The construction plan shall include all aspects of project construction, as specified in Attachment B to the rehearing request filed with the Commission on June 5, 1985, with respect to this project; provided, however, that items specified in said Attachment B which are addressed and described in the pollution control plan prepared pursuant to paragraph (A)(1) hereof may be addressed by reference to the appropriate portions of the pollution control plan when appropriate; provided, further, that the construction plan shall be consistent with the provisions of all other articles hereof; provided, further, that the construction plan shall be deemed to have been modified to incorporate the report approved pursuant to Article 51 hereof when such approval is given.

(2) At least 90 days prior to construction, the Licensee shall submit copies of the construction plan to the entities specified in paragraph (A)(1) hereof for formal review.

(C)(1) Licensee shall, after consultation with the entities specified in paragraph (A)(1) hereof, prepare a detailed operation plan for the project. The operation plan shall include, but not be limited to, the continuous minimum flow specified in Article 35 hereof, and the ramping rates provided for in Article 36 hereof; provided, however, that the operation plan shall be deemed to have been modified to incorporate the ramping rate or rates approved by the Commission pursuant to Article 36 hereof when such approval is given; provided, further, that the operation plan shall be consistent with the provisions of all other articles hereof. The operation plan shall also include: erosion and other pollution control measures that will ensure no deleterious material such as oil, hydraulic fluid and concrete are discharged into the South Fork Snoqualmie River after completion of project construction; and provisions for monitoring fish passage, screen operation, dissolved gases, water flows, erosion controls, sediment, bedload movement, mitigation measures, water temperatures and reestablishment of vegetation and reporting to the entities specified in paragraph (A)(1) hereof the results thereof; provided, that the specific requirements for conducting and reporting these monitoring studies shall be determined through the consultation required herein; provided, further, that items which are addressed and described in the pollution control plan prepared pursuant to paragraph (A)(1) hereof which relate to project operation may be addressed in the operation plan by reference to the appropriate portions of the pollution control plan when appropriate.

(2) At least 90 days prior to initial operation of the project, the Licensee shall submit copies of the operation plan to the entities specified in paragraph (A)(1) hereof for formal review.

(D) If any entity specified in paragraph (A)(1) hereof does not provide the Licensee with written comments or objections within 30 days from its receipt of the pollution control plan, construction plan or operation plan pursuant to paragraphs (A)(3), (B)(2) or (C)(2) hereof, respectively, the Licensee shall make a written request to such entity to confirm in writing, within 10 days of its receipt of such request, that it has no objection to the particular plan. At the expiration of such 10-day period, and if no written objections to the particular plan are received by the Licensee before or during such 10-day period, the Licensee, at the expiration of such 10-day period, shall file the plan with the Commission along with any written comments from such entities and any comments it has on such comments. If the Licensee receives written objections to the particular plan before or during such 10-day period it shall promptly, and in good faith, attempt to resolve the matter which is the subject of the objection with the objecting entity and the other entities specified in paragraph (A)(1) hereof. If the matter is resolved to the mutual satisfaction of the Licensee, the objecting entity and the other entities, the Licensee shall modify the particular plan

to reflect the mutual agreement of the parties and shall file the plan with the Commission along with any written comments from such entities, any comments it has on such comments, and written documentation of the objection and the manner in which it was resolved; provided, however, that the filing of such plan and other documents in such cases shall be done no later than 20 days following the expiration of the appropriate 10-day period described above. If the matter is not resolved to the mutual satisfaction of the Licensee, the objecting entity and the other entities, the Licensee, no later than 20 days following the expiration of the appropriate 10-day period described above, shall file the particular plan with the Commission along with any written comments and objections from such entities, any comments it has on such comments and objections, and written documentation of its attempt to resolve the matter which was objected to; provided, however, that the Licensee shall notify all of the above-referenced entities when it will make such a filing with the Commission and such entities will have 10 days thereafter in which to file with the Commission any additional comments they may have on the matter which was the subject of the objection. The Licensee shall comply fully with the provisions of the pollution control plan, construction plan and operation plan as filed with the Commission; provided, however, that the Commission reserves the right to direct changes in any such plan in response to any unresolved objection or for any other appropriate reason.

Article 34. (A) Licensee shall allow representatives of the joint agencies to inspect the project site at any reasonable time before and during construction and operation of the Twin Falls Project. Licensee shall also maintain and make available to the joint agencies a record of project operations, including daily amount of diversion, daily record of flows over the diversion, and rates of change of both diverted flows and bypassed flows. In addition, the Licensee shall document all unusual occurrences such as load rejections, bring such events to the immediate attention of the joint agencies, and make such documentation available to such entities.

(B) The Licensee shall, prior to the first sale of energy produced by the project and annually throughout the term of this license, conduct operational demonstrations of all facilities relevant to fish and wildlife concerns including, but not limited to, ramping, bypass valves, flow monitoring devices, automatic valves, transfer switches, alarm systems, and emergency power supplies. These functions and facilities will be demonstrated by simulating the actual signals intended to actuate them. The demonstrations will be conducted within a period of the year agreed upon by the joint agencies and the Licensee. The Licensee shall give written notification of each demonstration one month in advance to the joint agencies, the Commission's Regional Engineer, and the Director, Office of Hydropower Licensing. If the Licensee receives

written notification from any of the joint agencies following a demonstration indicating that it believes the demonstration has indicated that the project is in violation of any term or condition of this license, it shall promptly, but in no event later than 20 days after

receipt thereof, file a copy of such written notification with the Commission.

Article 35. Licensee shall discharge from the Twin Falls Project diversion weir the following interim continuous minimum flows, or the inflow to the project, whichever is less, for the protection of aquatic resources in the South Fork Snoqualmie River: (a) 75 cubic feet per second (cfs) from August 1 through April 30; and (b) 150 cfs from May 1 through July 31. The interim minimum flows may be temporarily modified if required by operating emergencies beyond the control of the Licensee and for short periods upon mutual agreement between the Licensee, the joint agencies, and the Washington State Department of Ecology.

Article 36. Licensee shall, after consultation with the Washington State Department of Game, the Tulalip Tribes of Washington, and the U.S. Fish and Wildlife Service, conduct studies to determine a ramping rate needed at the Twin Falls Project to ensure protection of downstream fish resources. Further, Licensee shall, within 6 months of commencement of project operations, complete the study and submit a report on the results of the study and recommendations for a ramping rate to the entities specified herein for formal review, comment, objection and submittal to the Commission pursuant to the provisions specified in paragraph (D) of Article 33 hereof; provided, however, that until a final ramping rate is approved by the Commission, the maximum ramping rate shall be 1 foot/hour.

Article 40. Licensee shall, prior to the commencement of any future construction at the project, consult with the Washington State Historic Preservation Officer (SHPO) about the need for any cultural and/or Indian religious resources survey and salvage work and with the Tulalip Tribes of Washington (Tribes) about the need for any Indian religious resources survey and salvage work. The Licensee shall make available funds in a reasonable amount for any such work as required. If any previously unrecorded archeological, historical or Indian religious sites are discovered during the course of construction or development of any project works or other facilities at the project, construction activity in the vicinity shall be halted, a qualified archeologist shall be consulted to determine the significance of the sites, and the Licensee shall consult with the SHPO, and with the Tribes in the case of previously unrecorded Indian religious sites, to develop a mitigation plan for protection of significant archeological, historical or Indian religious resources. If the Licensee and the SHPO, and the Tribes in the case of Indian religious resources, cannot agree on the amount of

money to be expended on archeological, historical or Indian religious work related to the project, the Commission reserves the right to require the Licensee to conduct, at its own expense, any such work found necessary.

(E) Paragraph (e) of Article 49 of ordering paragraph (G) of the order issuing a license for the Twin Falls Project No. 4885 (31 FERC ¶ 61,151 (May 6, 1985)) is amended to read as follows:

(e) The following additional conditions apply to any intended conveyance and use and occupancy permission under this article:

(1) Before conveying the interest or granting the permission, the Licensee shall determine that the proposed use of the lands to be conveyed or for which a grant of permission is to be given is not inconsistent with any approved Exhibit R or approved report on recreational resources of an Exhibit L; or, if the project does not have an approved Exhibit R or approved report on recreational resources, that the lands to be conveyed or for which a grant of permission is to be given do not have recreational value.

(2) The instrument of conveyance must include covenants running with the land, and the grant of permission must contain provisions, adequate to ensure that: (i) the use of the lands conveyed or for which a grant of permission is given shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; and (ii) the grantee or permittee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the land conveyed or for which a grant of permission is given will occur in a manner that will protect the scenic, recreational, and environmental values of the project and the Snohomish River Basin.

(3) Before conveying the interest or granting the permission, the Licensee, after consultation with the joint agencies, shall determine that the proposed use of the lands to be conveyed or for which a grant of permission is to be given is not inconsistent with the provisions of the pollution control, construction and operation plans prepared pursuant to Article 33 hereof. At least 90 days prior to conveying the interest or granting the permission, the Licensee shall submit a

copy of the proposed conveyance or grant of permission to the joint agencies for formal review, comment, objection and submittal to the Commission pursuant to the provisions specified in paragraph (D) of Article 33 hereof; provided, however, that the Licensee, except when required by paragraph (d) hereof, need not make any filing with the Commission in cases where no objection has been received by the Licensee or where the objection has been resolved pursuant to the provisions of paragraph (D) of Article 33 hereof.

(4) The Commission reserves the right to require the Licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's and the Snohomish River Basin's scenic, recreational, and other environmental values.

(F) The license for the Twin Falls Project No. 4885 is also subject to the following additional articles:

Article 50. The project works shall be constructed in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission, prior written notice to the joint agencies, and a prior opportunity provided to such agencies to comment and object, any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

Upon the completion of the project, or at such other time as the Commission may direct, the Licensee shall submit to the Commission for approval revised exhibits insofar as necessary to show any divergence from or variations in the project area and project boundary as finally located or in the project works as actually constructed when compared with the area and boundary shown and the works described in the license or in the exhibits approved by the Commission, together,

with a statement in writing setting forth the reasons which in the opinion of the Licensee necessitated or justified variation in or divergence from the approved exhibits. Such revised exhibits shall, if and when approved by the Commission, be made a part of the license under the provisions of Article 2 hereof.

Article 51. Licensee shall, after consultation with the Washington State Parks and Recreation Commission, the National Park Service, and other interested agencies and entities, prepare and file with the Commission for approval within two years from the date of issuance of this license, and prior to commencement

of construction activities, a revised Report on Recreation Resources for Project No. 4885. The filing shall include a drawing showing the type and location of the facilities to be provided at the project, a construction schedule, and documentation of consultation with the above-named agencies.

By the Commission.

( S E A L )

*Lois D. Cashell*  
Lois D. Cashell,  
Acting Secretary.



Project Nos. 4885-005 and 006

ATTACHMENT A

Dunne Study (August, 1984)--Major Recommendations  
and Project Requirements for Erosion Control

1. Diversion Weir. Supervise construction of the diversion weir closely to ensure that coffer dam construction and dredging are conducted with care.
2. Intake Structure.
  - A. Isolate the excavation from the river, and carry out any work instream, adjacent to, or affecting the river, at low flow.
  - B. Locate a settling pond, to hold water before it returns to the river, on the low terrace adjacent to the intake structure, as far away from the riverbank as possible. Reinforce the bank near the intake and far enough upstream to protect the settling pond.
3. Pipeline Tunnel. Treat turbid water which drains out during excavation in a settling pond associated in or with the intake structure or the power house construction area.
4. Powerhouse. Pump water from the excavation site to a settling basin northwest of the excavation.
5. Access Roads.
  - A. Improve the existing older road by regrading, installing run-off control and improving the gravel surface.
  - B. For the new section of road connecting the present road to the intake site, locate a sediment pond as provided in section 2B. Install and maintain a control system with care and a significant safety margin.
  - C. For the road leading to the powerhouse from S.E. 159th, locate sediment pond along its length or divert run-off onto the forest floor.
  - D. Locate a sedimentation basin of sufficient size near the Twin Falls powerhouse and lead drainage to the basin northward along the depression which is separated from the river by a berm of holdery alluvium.

Project Nos. 4885-005 and 006

ATTACHMENT B

OTHER CONSTRUCTION PLAN REQUIREMENTS

A complete project description including size, shape and location of any structures; the extent and location of any alteration to the physical environment; the nature, frequency, and duration of activities associated with the project.

- I. A scale drawing of the property indicating:
  - a. boundaries, easements, and ownerships as set forth in the legal description
  - b. topography at appropriate contour intervals
  - c. existing structures and improvement
  - d. vegetation, water courses, and other natural features
  - e. proposed improvements
  - f. utilities plans
  - g. circulation plans on and off the site
  - h. landscaping plans
  - i. other plans and drawings deemed necessary for evaluation
  - j. identification of soils found in project area
- II. Background and baseline data including a complete description of the physical characteristics of the area and a discussion of the relationships of each of the physical elements to one another. An analysis of the capability of the environment to sustain the present resources and habitat potential; identify the critical factors for maintenance of the environment. If this information is already provided in license application documents, specific references to the documents containing those materials will be sufficient.

III. Land acquisition plan and schedule.

IV. Construction plan for the project should specify mitigations and the means of attaining those intended mitigations for:

Project Nos. 4885-005 and 006

- a. demolition of existing structures
- b. removal and disposal of man-made and natural materials
- c. excavation, restoration and revegetation
- d. erosion control
- e. drainage control
- f. traffic control during construction phases
- g. utilities continuity and disruption
- h. emergency preparedness and management
- i. stream improvement facilities for fish and wildlife habitat enhancement
- j. Fish screens, fish bypass system for the intake, and racks for the tailrace.

V. Schedules for construction, and mitigations. Anticipated effects of construction timing on the site and aquatic resources, including provisions for handling the consequences of project delays of various durations, especially those affecting aquatic resources.

VI. Identification of and schedule for obtaining permits, approvals and other agency actions.

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Raymond J. O'Connor, Chairman;  
Georgiana Sheldon, A. G. Sousa,  
Oliver G. Richard III and Charles G. Stalon.

South Fork Resources, Inc.	)	Project No. 4885-003
Puget Sound Power & Light Co.	)	Project No. 5681-000
City of Tacoma, Department of Public Utilities	)	Project No. 5683-000

ORDER ISSUING MAJOR LICENSE, DENYING  
COMPETING PRELIMINARY PERMIT APPLICATIONS,  
GRANTING MOTIONS TO INTERVENE, DENYING MOTIONS FOR  
COORDINATION OF PROCEEDINGS AND FOR HEARING, AND GRANTING WAIVER

(Issued May 6, 1985)

On July 13, 1982, South Fork Resources, Inc. (South Fork) filed an application for a license under Part I of the Federal Power Act (Act) to construct, operate, and maintain the proposed Twin Falls Project No. 4885. The project would be located on the South Fork Snoqualmie River in the Snohomish River Basin in King County, Washington, would occupy lands of the United States, and would affect the interests of interstate and foreign commerce. Previously, on November 24, 1981, Puget Sound Power and Light Company, and the City of Tacoma, Department of Public Utilities, had each filed separate applications for preliminary permit for the same site to study the feasibility of Project Nos. 5681 and 5683, respectively.

Public notice of the filing of the license application for Project No. 4885 was given on August 30, 1982, with November 5, 1982, as the last date for filing comments, protests or motions to intervene. Numerous letters of comment were filed by Federal and state agencies. Several motions to intervene were filed. The significant concerns raised by the interveners and the commenters are discussed below.

Motions to Intervene

The Weyerhaeuser Company, on November 1, 1982, filed a timely motion to intervene. The United States Department of the Interior (Interior), on May 10, 1984, filed a late motion to intervene which was subsequently granted on July 30, 1984. Late motions to intervene in this proceeding were also filed on February 24, 1983, jointly by the National Marine Fisheries Service (NMFS) and the Tulalip Tribes of Washington (Tribes);

Project Nos. 4885-003,  
5681-000 & 5683-000

-2-

on August 17, 1983, by the Snoqualmie Tribe; and on June 17, 1983, jointly by the Washington State Department of Fisheries (WDF) and the Washington State Department of Game (WDG). In addition, on February 24, 1983, the NMFS and the Tribes filed a Joint Petition for Coordination of Proceedings, for Development of Data, and for Hearing and Motion for Suspension and Stay of Proceedings. And, on June 17, 1983, the WDF and WDG filed a joint Motion to Intervene and For Coordination of Proceedings, For Development of Data, and For Hearing.

The Department of the Interior, the National Marine Fisheries Service, the Tulalip Tribes of Washington, the Washington State Department of Fisheries, and the Washington State Department of Game all initially expressed concerns about the cumulative impact of hydroelectric power in the Snohomish River Basin. The Snoqualmie Tribe expressed general basin-wide concerns over potential impacts upon existing cultural and religious activities and upon unknown archeological sites. The Weyerhaeuser Company indicated it owns a portion of the project area and uses large quantities of power generated in the area.

We will grant each late motion to intervene but deny the motions for coordination of proceedings. Each of the movants for intervention has either statutory responsibilities to enforce or treaty rights to protect. In the case of each motion to intervene, the movant has shown good cause for late intervention by demonstrating that it has an interest in these proceedings that is not adequately represented by other parties and that there were valid reasons why intervention had not been sought earlier. Furthermore, there will be no prejudice to other parties, nor will resolution of the proceeding be delayed or otherwise disrupted.

With respect to the motions for coordination of proceedings and for hearing, we explain below that this project will not contribute to an adverse cumulative environmental impact upon the Snohomish Basin. Accordingly, these motions will be denied with respect to this proceeding.

Waiver of Commission's Regulations

On April 2, 1984, and October 22, 1984, South Fork filed supplemental information to its license application. In those filings, South Fork advised the Commission in detail as to how it proposed to resolve various issues concerning the project that had been raised by numerous interested Federal and state agencies and Indian tribes. One of those proposals was to move the proposed powerhouse site 800 feet upstream to reduce the bypass reach and avoid the most sensitive part of the stream.

Under Section 4.35(a) of the Commission's regulations, 18 C.F.R. §4.35 (1984), if an applicant amends its filed license application to "materially amend the proposed plans of development," the Commission will change the date of acceptance of the application to the date of the amendment. Section 4.35(b) defines a "material" amendment as one proposing any "fundamental and significant change," including a change in the location of the powerhouse.

On January 11, 1985, South Fork filed a request for a waiver of Section 4.35 so that it may implement its proposal to move the powerhouse without having the date of acceptance of its application changed. We will grant the waiver. The proposal to move the powerhouse came as a result of consultation and negotiation with various agencies and Indian tribes for the sole purpose of improving the environmental and aesthetic aspects of the project. That being the case, we do not believe it would be equitable to penalize South Fork for its efforts to make these improvements and for cooperating with the agencies and tribes.

#### Competing Applications

The plans proposed in the preliminary permit applications and the plans proposed in the license application have been analyzed by the staff. The projects propose substantially the same development. Consistent with Section 4.33(f) of the Commission's regulations, 18 C.F.R. § 4.33(f) (1984), which states that the Commission will favor applications for licenses over applications for preliminary permits, this license is being issued to South Fork Resources, Inc., and the two pending preliminary permit applications will be denied.

#### Project Description and Operation

The proposed project would consist of a 6-foot-high diversion weir, a 200-foot-long intake channel, an intake structure, a 4,560-foot-long tunnel/penstock, a powerhouse containing two generating units each rated at 10.0 MW, a tailrace, a switchyard, a 2,300-foot-long transmission line, an access road to the diversion structure, an access road to the powerhouse, and appurtenant facilities, as more fully described in ordering paragraph (B) hereof.

The run-of-river project would have a hydraulic capacity of 610 cfs, and would generate an estimated 69.2 million kWh of energy annually. As discussed in more detail below, provision for minimum instream flow releases will be made.

#### ENVIRONMENTAL CONSIDERATIONS

##### Impacts of Clustered Hydropower Development in the Basin

In the recently issued Weeks Falls Project No. 7563 license, <sup>1/</sup> we discussed extensively the absence there of any potential for causing cumulative environmental impacts in the Snohomish River Basin. The Twin Falls project is located just a few miles from the Weeks Falls project and, like Weeks Falls, is upstream of Snoqualmie Falls, an impassable barrier preventing the migration of anadromous fish species. As in Weeks Falls, the applicant here has consulted extensively with the interested Federal and state agencies and the Tulalip Tribes in defining and addressing all the significant environmental issues associated with the development of the proposed project and defined and proposed appropriate measures to offset the potential adverse impact of erosion and stream sedimentation upon aquatic resources. Here, as in Weeks Falls, the record evidence demonstrates that the project will not contribute to any adverse cumulative environmental impacts, and all the parties and agencies who originally raised concerns about potential adverse cumulative impacts now agree that this project should be processed on an individual basis. <sup>2/</sup>

The Snoqualmie Tribe, an intervener, has expressed general basin-wide concerns over potential impacts upon existing cultural and religious activities and upon unknown archeological sites, but has not documented the exact nature and substance of their concerns. The staff has found no reasonable risk of impacts upon the activities and resource values raised by the Snoqualmies, based upon the information available to the staff and taking into account the environmental safeguards stipulated in the license articles.

##### Agreement Between South Fork and the Tulalip Tribes

On October 22, 1984, South Fork filed with the Commission an agreement (characterized by the parties as a Memorandum of Understanding) reached by South Fork and the Tulalip Tribes with respect to Project No. 4885. The agreement provides that its terms must be included as conditions in the license. Those terms

<sup>1/</sup> South Fork II, Inc., 31 FERC ¶ 61,\_\_\_ (April 25, 1985).

<sup>2/</sup> The Commission, in Weeks Falls, indicated that it would consider proceeding with license approval on a case-by-case basis rather than waiting to act pursuant to the results of the Cluster Impact Assessment Procedure (CIAP) whenever these criteria are met.

Article 10. The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission may direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

Article 11. Whenever the Licensee is directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement, the Licensee shall reimburse the owner of the headwater improvement for such part of the annual charges for interest, maintenance, and depreciation thereof as the Commission shall determine to be equitable, and shall pay to the United States the cost of making such determination as fixed by the Commission. For benefits provided by a storage reservoir or other headwater improvement of the United States, the Licensee shall pay to the Commission the amounts for which it is billed from time to time for such headwater benefits and for the cost of making the determinations pursuant to the then current regulations of the Commission under the Federal Power Act.

Article 12. The operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Commission may prescribe for the purposes hereinbefore mentioned.

Article 13. On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity

for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State-law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

Article 14. In the construction or maintenance of the project works, the Licensee shall place and maintain suitable structures and devices to reduce to a reasonable degree the liability of contact between its transmission lines and telegraph, telephone and other signal wires or power transmission lines constructed prior to its transmission lines and not owned by the Licensee, and shall also place and maintain suitable structures and devices to reduce to a reasonable degree the liability of any structures or wires falling or obstructing traffic or endangering life. None of the provisions of this article are intended to relieve the Licensee from any responsibility or requirement which may be imposed by any other lawful authority for avoiding or eliminating inductive interference.

Article 15. The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

**Article 5.** The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction, maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights of occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

**Article 6.** In the event the project is taken over by the United States upon the termination of the license as provided in Section 14 of the Federal Power Act, or is transferred to a new licensee or to a non-power licensee under the provisions of Section 15 of said Act, the Licensee, its successors and assigns shall be responsible for, and shall make good any defect of title to, or of right of occupancy and use in, any of such project property that is necessary or appropriate or valuable and serviceable in the maintenance and operation of the project, and shall pay and discharge, or shall assume responsibility for payment and discharge of, all liens or encumbrances upon the project or project property created by the Licensee or created or incurred after the issuance of the license: Provided, That the provisions of this article are not intended to require the Licensee, for the purpose of transferring the project to the United States or to a new licensee, to acquire any different title to, or right of occupancy and use in, any of such project property than was necessary to acquire for its own purposes as the Licensee.

**Article 7.** The actual legitimate original cost of the project, and of any addition thereto or betterment thereof, shall be determined by the Commission in accordance with the Federal Power Act and the Commission's Rules and Regulations thereunder.

**Article 8.** The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may be mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

**Article 9.** The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

#### Instream Flows and Habitat Enhancement

South Fork proposes to maintain the following minimum flows in the 1-mile-long bypassed reach of river: (a) 75 cubic feet per second (cfs) from August 1 through April 30; and (b) 150 cfs from May 1 through July 31. In conjunction with the proposed minimum flow schedule, South Fork proposes to enhance trout habitat in 1,500 feet of channelized river upstream of the project.

The WDG, the FWS, and the Tribes have agreed that the proposed minimum flows and the habitat enhancement plan will provide adequate protection for the fishery resources.

South Fork also proposes a 5-year study of the trout populations in the bypassed reach and in the reach proposed for habitat enhancement. South Fork, the WDG, and FWS, and the Tribes have agreed that, following commencement of project operations, if the combined trout populations of the bypassed and enhancement reaches exceeds pre-project levels, a year round minimum flow of 75 cfs would provide adequate protection of the fishery resources in the bypassed reach.

The proposed minimum flow schedule is sufficient to protect aquatic resources in the bypassed reach. Although some fishery habitat will be lost in the bypassed reach as a result of reduced flows, the proposed off-site habitat enhancement will provide adequate compensation. The fishery study should provide the necessary information to determine whether or not the trout population in the South Fork Snoqualmie River is increased as a result of the boulder groupings in the upstream channelized reach of river.

If the habitat modifications enhance the trout population in the South Fork Snoqualmie River beyond pre-project levels, a final, year-round flow of 75 cfs may be justified. Article 35 requires the Licensee to discharge from the project diversion weir the following interim continuous minimum flows or the natural inflow, whichever is less: (a) 75 cfs from August 1 through April 30; and (b) 150 cfs from May 1 through July 31. Article 37 requires that the proposed habitat modifications and fishery study be implemented after consulting with the WDG, the FWS, and the Tribes. Article 37 also requires the Licensee to file with the Commission, the results of the fish study and recommendations for a long-term minimum flow schedule.

#### Fishery Resources

The FWS and the WDG recommend the following measures to protect the fishery resources of the South Fork Snoqualmie River: (a) installation of fish screens and a fish bypass

system for the project intake to prevent the entrainment and subsequent mortality of fish; (b) installation of racks across the tailrace to prevent adult fish from entering the draft tube; and (c) determination of a ramping rate for project operations that would prevent stranding of fish.

In the Report of Fish, Wildlife, and Botanical Resources, South Fork proposes to install intake screens, a fish bypass system and racks across the tailrace, and to establish, following project start-up, a ramping rate after consultation with the agencies. Each of these mitigation measures, including an appropriate ramping rate, should be established in cooperation with the appropriate agencies. Article 36 requires the licensee to consult with the WDG, the FWS, and the Tribes and conduct studies to determine an appropriate ramping rate for the protection of fish resources. The results of the studies and recommendations for a ramping rate are to be filed for Commission approval within 6 months of commencement of project operations. Functional design drawings for the fish screens, bypass system, and the tailrace are not included in the report. Therefore, Article 38 requires the Licensee to file functional design drawings and as-built drawings with the Commission.

#### Wildlife Habitat

To compensate for the project-related loss of wildlife habitat on State of Washington (State) lands, South Fork proposes to assist the State in acquiring a 50-acre parcel of replacement land, located adjacent to the intake structure, from the Bureau of Land Management (BLM) of Interior. If the land purchase is not feasible, South Fork proposes to acquire land with comparable wildlife value to the State lands that would be affected by the project. The WDG concurs with the proposal.

As discussed in the Report on Fish, Wildlife, and Botanical Resources, South Fork proposes to revegetate disturbed areas in accordance with WDG guidelines. The proposed measures would help minimize impacts to wildlife, and are therefore approved herein and made part of the license. South Fork's proposal would adequately compensate the State for loss of wildlife productivity on State lands. Article 39 requires the Licensee to implement the proposed measures.

#### Visual Resources

The project facilities, including transmission line, road access, diversion structure, powerhouse, switchyard, and tailrace will have moderate visual impacts due in part to the sensitivity levels that viewers have for the visual resources in the area.

require South Fork to maintain certain minimum instream flows, to allow tribal staff to inspect the project site at anytime before, during, and after construction, to pay the Tribes unspecified legal and professional fees to defray the cost of monitoring the project, and to develop and submit to the Tribes for review, under procedures similar to those specified in Article 33, a detailed construction and operation plan which is to include an erosion and sedimentation control plan embodying the recommendations of the Dunne study. 3/ The agreement further provides that if any dispute arises concerning the adequacy of the erosion and sedimentation control plan or other construction documents, such dispute must be resolved by unanimous agreement of the Tribes and affected agencies before construction can begin. Finally, construction cannot begin until South Fork receives the approval of the Tribes.

In the license for the Weeks Falls Project No. 7563 issued on April 25, 1985, we did not incorporate the provisions of the agreement as conditions of the license because, as we explained there, it was neither appropriate nor necessary specifically to approve the agreement and to include verbatim all its terms as specific conditions in the license. Here, as in Weeks Falls, the articles we have included in the license adequately address all of the subjects raised in the agreement. See Articles 33 through 38. Furthermore, the Commission's final authority with respect to the licensing conditions is not compromised.

#### Erosion, Slope Stability, and Sediment Control

Increased erosion and subsequent increases in sediment load in the river will occur due to excavation of soils and unconsolidated alluvial and glacial deposits during project construction and during spoil disposal. The greatest increases in erosion will be expected during construction on steep slope segments of the access road alignments, at the diversion dam and intake sites, and at the powerhouse and on the slope immediately above the powerhouse. The greatest losses of sediment to the river will be at the diversion and intake sites and at the tailrace.

The impoundment will function as a trap to coarse sand and gravel sediment bedload in the river that would otherwise normally pass through the project reach. Oversteepened cut slopes will be subject to slumping or landsliding.

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3/ T. Dunne, Effects of the Twin Falls and Weeks Falls Projects on Sedimentation along the Snoqualmie River System, filed October 22, 1984.

The WDF, WDG, Fish and Wildlife Service (FWS) of the Department of the Interior, and the Tribes recommend that South Fork consult with appropriate resource agencies and the Tribes and prepare a plan to minimize erosion and sedimentation during project construction and operation. The WDF emphasizes that the key to prevention of increased sediment from the project is sound erosion control, including: (1) good engineering; (2) careful design and stabilization of excavated slopes; (3) revegetation of disturbed sites; (4) careful construction and maintenance of access roads, particularly road drainage; (5) good design and frequent maintenance of sedimentation ponds, installed and maintained with a significant margin of safety; (6) appropriate flushing of the reservoir; and (7) implementation of a sediment control plan required by county ordinance.

South Fork proposes strict erosion and sediment control measures that would reduce the degree of erosion and loss of sediment to the river to minimal levels. Among these measures would be: siltation ponds to trap sediment at the project site during construction and at spoil disposal sites; proper grading of cut slopes, revegetation, and use of buttressing, retaining walls, drainage and other measures as would be necessary to stabilize slopes; and strict adherence to King County grading permit conditions that would encompass: steepness of cut slopes, location of tops and toes of cut slopes, erosion control, preparation of ground, fill material, drainage and sediment runoff control, design of benches and terraces, access road maintenance, and restoration of all areas disturbed by construction activities and spoil disposal. South Fork proposes to prepare a temporary erosion and sediment control plan following the King County guidelines and other guidelines established by concerned agencies and the Tribes. South Fork also agrees to a license condition that would require consultation with resource agencies and the Tribes in preparation of a detailed erosion, sediment, and slope stability control plan prior to any ground disturbing activity at the project.

Implementation of erosion, slope stability, and sediment control measures proposed by South Fork and the agencies, and adherence to the relevant agency guidelines during design, construction and operation of the project will ensure that erosion and sedimentation impacts at the project are reduced to insignificant levels. Article 33 requires the Licensee to solicit appropriate participation by the agencies and the Tribes in the preparation and implementation of a detailed erosion, slope stability, and sediment control plan for the project. The Article also requires appropriate agency consultation in designing and scheduling means to pass bedload sediment through the diversion dam.



Other Environmental Concerns

Water quality certification, pursuant to Section 401 of the Clean Water Act, 33 U.S.C. §1341, was granted for the proposed project by WDE on April 1, 1983.

No Federally listed threatened or endangered species or critical habitat, or sites listed or eligible for listing on the National Register of Historic Places will be affected by the project.

FINDING OF NO SIGNIFICANT IMPACT

Minor, short-term impacts related to project construction activities will include increased erosion, stream sedimentation and turbidity, noise, vehicular exhaust emissions, disturbances to local wildlife populations and aquatic resources, and disruption of local recreational activities. License Article 33 requires the Licensee to prepare a plan in consultation with the appropriate agencies and the Tribes to control erosion, dust, and slope stability, and to minimize sedimentation or other potential water pollutants, and to provide for the passage of sediment load through the diversion dam. Approximately 10 acres of coniferous forest vegetation providing significant wildlife habitat will be displaced by the proposed project facilities. License Article 39 ensures the acquisition of a 50-acre parcel of land, or an equivalent parcel, by the Licensee for mitigating project impacts on wildlife habitat.

Operation of the project will impact resident fish in the South Fork Snoqualmie River. License Article 35 requires the Licensee to discharge an interim continuous minimum flow to protect aquatic resources in the bypassed reach of river. Article 36 requires the licensee to consult with the WDG, the FWS and the Tribes and conduct studies to determine an appropriate ramping rate for the protection of fish resources. License Article 37 requires that the Licensee implement its proposed aquatic mitigation plan, including habitat enhancement measures and a planned fishery study, the results of which are to be filed, together with the comments of the appropriate resource agencies and the Tribes. License Article 38 requires the filing of functional design drawings for the planned fish screens, fish bypass system, and tailrace racks, together with the comments of the appropriate resource agencies and the Tribes. As-built drawings of these fish facilities will be filed after the completion of construction. Should any cultural resources be discovered during construction, Article 40 requires the Licensee to consult with the Washington State Historic Preservation Officer and to undertake any required survey and salvage work.

In accordance with the National Environmental Policy Act of 1969, 7/ an Environmental Assessment 8/ was prepared for the Twin Falls Project (FERC No. 4885). On the basis of the record, and Staff's independent environmental analysis, issuance of a license for the project, as conditioned herein, will not constitute a major Federal action significantly affecting the quality of the human environment.

ENGINEERING CONSIDERATIONS

Safety and Adequacy

The Supporting Design Report submitted with the application for license is preliminary. The design of the proposed project works is preliminary and conceptual in nature. License Article 42 requires the Licensee to submit final exhibit drawings and a final Supporting Design Report for approval prior to the start of construction. The proposed project structures would be safe and adequate if constructed in accordance with sound engineering practices and the articles of the license.

Economic Feasibility

The project will generate an estimated 69,248,000 kWh of energy annually. 9/ The project is economically feasible based on the price set forth in the power sales contract with Puget Sound Power & Light Company (Puget) filed November 1, 1984.

COMPREHENSIVE DEVELOPMENT

Need for the Project

On April 25, 1985, we licensed the Weeks Falls Project No. 7563. Weeks Falls is located within a few miles of Twin Falls on the South

7/ 42 U.S.C. § 4332 (1982).

8/ Environmental Assessment, Twin Falls Project, FERC No. 4885 -- Washington, January 31, 1985, prepared by the Division of Environmental Analysis, Office of Hydropower Licensing, Federal Energy Regulatory Commission. This document is available in the Division of Public Information and in the Commission's public file associated with this proceeding.

9/ The estimated generation is equivalent to the electric energy that could be produced from 32,062 tons of coal or 113,705 barrels of oil annually.

Those facilities that might be seen from the highway, where sensitivity is high, will not deviate from the visual character of the highway, and will be glimpsed at more or less the speed of 55 miles per hour. The number of people who make personal contact with the area is low, and although the proposed changes would be evident, the impact resulting from low to moderate sensitivity will also be low to moderate. Reduction of flows to a minimum of 75 cfs will not be noticed from the highway and will only be noticed during a few months in the year by the few people who may hike into the area.

South Fork's mitigation of all visual impacts is adequate, in consideration of the existing sensitivity levels. Those impacts resulting from construction will be mitigated to the extent possible, including erosion control, restrictions on excessive use of equipment, scheduling of blasting and noisy equipment for mid-day, and regrading and revegetation after completion of construction.

The impacts of project operation will be mitigated by facility alignment and location, burying the entire penstock and pipeline, using natural colors and building materials, establishing a minimum flow of 75 cfs year round, selective vegetative removal and revegetation, and topographic, vegetative, and physical barrier screening where necessary.

The Washington State Department of Ecology (WDE) expressed concern over whether the minimum flows of 75 cfs proposed by South Fork would be adequate to maintain the interests of the Washington State Parks and Recreation Commission (WP&RC) to establish the Olallie State Park. The reason for the park would be the high visual quality of the river and falls in that area and the convenient location to the highway. If the park were established, sensitivity levels would be high and the visual impacts of the project would be significant. WDE states that after consultation with the WP&RC, the proposed minimum flow year round is adequate to meet the desired aesthetic and recreational values.

The WDG, the WDE, the WP&RC, and the King County Department of Planning and Community Development concur in the measures to mitigate the impacts on visual resources as proposed in South Fork's Report on Aesthetic Resources. The Report is approved herein and made a part of the license.

#### Cultural Resources

No known archeological or historic sites will be affected by the project. Article 40 requires the protection of archeological or historic sites in the event that such sites are discovered during construction, and in the event of any future construction at the project.

#### Recreational Resources

South Fork consulted with the appropriate resource agencies in formulating its plan for recreational development at and near the project. The agencies are generally supportive of the proposed plan, as it will enhance public use opportunities, utilizing the existing scenic natural resource values in the area. Therefore, the Report on Recreational Resources is approved herein and made a part of the license. Article 41 requires the Licensee to file a revised recreation drawing showing the modified configuration of project facilities associated with the upstream powerhouse location.

Although WP&RC was active in consultations involving the recreation plan, 4/ it has requested 5/ that all hydropower license actions affecting state park lands -- such as Commission action on the Twin Falls Project -- be held in abeyance until such time as the Northwest Power Planning Council (Council) has completed its study to identify and rank potential hydroelectric sites in the Pacific Northwest. 6/

Having reviewed WP&RC's request and the schedule for the Council's site-ranking study, we have concluded that granting WP&RC's request would be inappropriate. First, although the study will examine recreational issues in addition to fish and wildlife issues, the results of the study will not be known until the summer of 1986. Second, and more importantly, WP&RC has not identified any recreational concerns we have not examined or which justify our holding up issuance of the license for over one year until the Council's site-ranking study is completed.

- 4/ WP&RC has erred in asserting in its April 18, 1985, filing that its comments and recommendations during the agency review period were not filed with the Commission. South Fork did file these comments and recommendations. See South Fork's Revised Application for License, filed July 13, 1982, Exhibits E-7.13 through E-7.21.
- 5/ See letter dated January 19, 1984, from WP&RC to King County Building and Land Development Division, filed with the Commission on April 2, 1984, as Attachment 4 to letter to the Commission from South Fork; WP&RC's letter filed with the Commission on April 18, 1985.
- 6/ The site-ranking study is being prepared by the Council pursuant to Section 14.2 of the Northwest Conservation and Electric Power Plan, which itself was prepared pursuant to Section 4(d) of the Pacific Northwest Electric Power Planning and Conservation Act, 16 U.S.C. §§ 839b et seq.

(3) All of the structures, fixtures, equipment, or facilities used or useful in the operation or maintenance of the project and located within the project boundary, all portable property that may be employed in connection with the project, located within or outside the project boundary, as approved by the Commission, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) Exhibits, A, F, and G, designated in Ordering Paragraph (B) above, are approved and made a part of the license only to the extent that they show the general location and nature of the project works.

(D) Within 90 days of the date of issuance of this order, the Licensee shall file originals of each approved Exhibit drawing reproduced on silver or gelatin 35 mm microfilm mounted on Type D (3 1/4" x 7 3/8") aperture cards. In addition the Licensee shall file two Diazo-type duplicate aperture cards. The original set and one duplicate set of aperture cards should be filed with the Secretary of the Commission. The remaining duplicate set of aperture cards should be provided to the Commission's San Francisco Regional Office. The PERC drawing numbers should be shown in the margin below the title block of microfilmed drawings, and also in the upper right corner of each appropriate aperture card.

(E) The Reports of Recreational Resources (pages E-52 to E-66), and Aesthetic Resources (pages E-76 to E-82) of the Environmental Report, Exhibit E, filed on July 13, 1982, are approved and made a part of the license, except as modified by any license articles contained herein.

(F) Proposed measures to revegetate disturbed areas, contained in the Report on Fish, Wildlife, and Botanical Resources (page E-34), filed on July 13, 1982, are approved and made a part of the license, except as modified by any license articles contained herein.

(G) This license is also subject to the terms and conditions set forth in Form L-2, (revised October, 1975), entitled "Terms and Conditions of License for Unconstructed Major Project Affecting Lands of the United States", attached to and made a part of this license. The license is also subject to the following additional articles:

Article 33. Licensee shall, after consultation with the Washington State Department of Ecology, the Washington State Department of Fisheries, the Washington State Department of Game,

the Washington State Department of Transportation, the Washington State Parks and Recreation Commission, the King County, Washington, Department of Planning and Community Development, the U.S. Fish and Wildlife Service, and the Tulalip Tribes of Washington, prepare a plan to control erosion, dust, and slope stability, and to minimize the quantity of sediment or other potential water pollutants resulting from construction and operation of the project. The plan shall address, among other things, vegetation, design and location of sedimentation ponds, grading of slopes, control of surface drainage, temporary stockpiling of topsoil, storage and disposal of excess excavation and slide materials, and any construction or upgrading of access roads, including construction access. The plan shall also include a subplan for the passage of sediment through the dam. The subplan shall address, among other things: functional design drawings of measures that would allow passage of sediment, an implementation schedule that provides for normal sediment passage periods defined to minimize adverse impacts on fish spawning and rearing, and provisions for cooperation with, and notification of, the entities listed above prior to sediment passage operations. The control plan shall also include: provisions for identifying and mapping of erosive soils and potentially unstable slopes; functional design drawings and map locations or control measures; an implementation schedule for the provisions not related to the subplan; monitoring and maintenance programs for project construction and operation; provisions for periodic review of the plan and for making any necessary revisions to the plan; provisions for submitting to the Director, Office of Hydropower Licensing, the Commission's Regional Engineer, and to the entities listed above, periodic reports on the progress of all investigations, implementation, monitoring, and maintenance accomplished under the plan during the period, and of work contemplated under the plan for the ensuing period; and documentation of consultation with the above entities during preparation of the plan.

Within one year from the date of issuance of this license and at least 90 days prior to any ground disturbing activity or soil disposal at the project, the Licensee shall submit copies of the plan to the entities listed above for review, comment and objection. If any such entity does not provide the Licensee with written comments or objections within 30 days from its receipt of the plan, the Licensee shall make a written request to such entity to confirm, within 10 days of its receipt of such request, that it has no objection to the plan. At the expiration of such 10 day period, the Licensee shall file the plan with the Commission along with any written comments and objections from the entities listed above and any comments it has on such comments and objections. The Licensee shall thereafter comply fully with the plan as filed with the Commission; provided, however, that the Commission reserves the right to direct changes in the plan.

Fork Snoqualmie River. In that licensing order we discussed in detail the issue of the need for power. There we found that there was a need for power because Puget Sound Power & Light Company had agreed to buy the power from Weeks Falls, because Puget Sound would use the power to satisfy its local distribution load in the surrounding area thereby reducing its power flows out to this area which is on the fringe of its distribution system, and because the Weeks Falls power would be immediately available to off-load existing fossil-fuel steamelectric plants in the Pacific Northwest, thereby conserving nonrenewable resources and reducing the emission of noxious byproducts of combustion to the atmosphere.

In the Twin Falls application before us here, the situation is analogous. Puget Sound has agreed to buy the Twin Falls power. The project is located very close to Weeks Falls, and the power would be immediately available for the same purposes. Accordingly, we find that there is a need for the power to be generated at Twin Falls.

#### Other Aspects of Comprehensive Development

Taking all aspects of the project into consideration, the project will make good use of the flow and fall of the South Fork of the Snoqualmie River, is not in conflict with any existing or planned development, and will be best adapted to the comprehensive development of the basin upon compliance with the terms and conditions of the license.

#### The Commission orders:

(A)(1) This license is issued to South Fork Resources, Inc. (Licensee) of Snoqualmie Pass, Washington, under Part I of the Federal Power Act (Act), for a term of 50 years, effective the first day of the month in which this order is issued, for the construction, operation and maintenance of the Twin Falls Hydroelectric Project No. 4885 to be located in King County, Washington, on the South Fork Snoqualmie River, occupying lands of the United States and subject to the terms and conditions of the Act which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the Act.

(2) In light of the Commission's determination, discussed in the text of this order, that the project will not cause any adverse cumulative environmental impacts, the Twin Falls Project No. 4885 shall not be included in, or subject to, the Cluster Impact Assessment Procedure (CIAP) to be conducted by the Commission staff with respect to the Snohomish River Basin.

(B) The Twin Falls Hydroelectric Project No. 4885 consists of:

(1) All lands, to the extent of the Licensee's interest in those lands, constituting the project area and enclosed by the project boundary. The project area and boundary are shown and described by a certain exhibit that forms part of the application for license and that is designated and described as:

<u>EXHIBIT</u>	<u>FERC DRAWING NO.</u>	<u>SHOWING</u>
G-1	4885-11	Project Boundary Map
(2) Project works consisting of: (a) a 6-foot-high, 150-foot-long reinforced-concrete diversion weir with crest elevation 1,082 feet msl; (b) a 200-foot-long, 20-foot-deep, concrete-lined, trapezoidal-section intake channel; (c) a 30-foot-high, 90-foot-long, 20-foot-wide, reinforced-concrete, gated intake structure with trash racks and fish screens; (d) a 4,559-foot-long conduit comprising: (i) a 284-foot-long, 8-foot-diameter vertical shaft; (ii) a 2,500-foot-long, 10-foot-horseshoe tunnel; (iii) a 1,700-foot-long, 8-foot-diameter, lined tunnel; and (iv) a 75-foot-long, 8-foot-diameter, buried steel penstock; (e) a 45-foot-wide, 80-foot-long, reinforced-concrete powerhouse containing two generating units each rated at 10.0 MW operated under a 435-foot head and at a flow of 305 cfs; (f) a concrete-lined tailrace having normal water surface elevation 630 feet msl; (g) the 125-foot-long 13.8-kV generator leads, and the 13.8/115-kV, 12/16/20/22.4 MVA transformer; (h) a 2,300-foot-long, double circuit, H-frame 115-kV overhead transmission line; (i) an access road to the intake structure and an access road to the powerhouse; and (j) appurtenant facilities.		

The location, nature and character of these project works are generally shown and described in the exhibit cited above and more specifically shown and described by certain other exhibits that also form a part of the application for license and that are designated and described as:

Exhibit A - Entitled Project Description, section 3 (page A-4) and section 5 (page A-5), filed January 11, 1985.

<u>EXHIBIT</u>	<u>FERC DRAWING NO.</u>	<u>SHOWING</u>
F-1	4885-12	General Plan
F-1A	4885-13	General Plan
F-2	4885-14	Diversion Intake
F-3	4885-15	Tunnel Profile & Sections
F-4	4885-16	Powerhouse Plan
F-5	4885-17	Powerhouse Sections & Elevations
F-6	4885-18	Substation
F-7	4885-19	Single Line Diagram

reproduced on silver or gelatin 35 mm microfilm mounted on a type D (3 1/4" x 7 3/8") aperture card. In addition, the Licensee shall file two Diazo type duplicate aperture cards. The original card and one duplicate aperture card should be filed with the Secretary of the Commission. The remaining duplicate card shall be provided to the Commission's San Francisco Regional Office. The FERC drawing number shall be shown in the margin below the title block of the microfilmed drawing, and also in the upper right corner of each aperture card.

Article 42. The Licensee shall file with the Commission revised Exhibit F drawings showing the final design of project structures for approval of the Director, Office of Hydropower Licensing. The revised Exhibit F drawings shall be accompanied by a supporting design report and the Licensee shall not commence construction of any project structure until the corresponding revised Exhibit F drawing has been approved.

Article 43. The Licensee shall provide the Commission's Regional Engineer (one copy) and the Director, Division of Inspections, (two copies) the final contract drawings and specifications for pertinent features of the project, such as water retention structures, powerhouse, and water conveyance structures, at least 60 days prior to start of construction. The Director, Division of Inspections, may require changes in the plans and specifications to assure a safe and adequate project.

Article 44. The Licensee shall review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction and shall ensure that construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days prior to start of construction of the cofferdam, the Licensee shall provide the Commission's Regional Engineer and the Director, Division of Inspections, one copy each of the approved cofferdam construction drawings and specifications and a copy of the letter(s) of approval.

Article 45. The Licensee shall commence construction of project works within two years from the issuance date of the license and shall complete construction of the project within four years from the issuance date of the license.

Article 46. Licensee shall within 90 days of completion of construction file with the Commission for approval by the Director, Office of Hydropower Licensing, revised Exhibits A, F, and G to describe and show the project as-built.

Article 47. The Licensee shall pay the United States the following annual charge effective the first day of the month in which this order is issued:

- (i) For the purpose of reimbursing the United States for the cost of administration of Part I of the Act, a reasonable annual charge as determined by the Commission in accordance with the provisions of its regulations in effect from time to time. The authorized installed capacity for that purpose is 26,700 horsepower.
- (ii) For the purpose of recompensing the United States for the use, occupancy, and enjoyment of 3.24 acres of its land, an amount determined pursuant to the Commission's regulations in effect from time to time.

Article 48. Pursuant to Section 10(d) of the Act, after the first 20 years of operation of the project under license, a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. One half of the project surplus earnings, if any, accumulated after the first 20 years of operation under the license, in excess of the specified rate of return per annum on the net investment, shall be set aside in a project amortization reserve account at the end of each fiscal year. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year after the first 20 years of operation under the license, the amount of that deficiency shall be deducted from the amount of any surplus earnings subsequently accumulated, until absorbed. One-half of the remaining surplus earnings, if any, cumulatively computed, shall be set aside in the project amortization reserve account. The amounts established in the project amortization reserve account shall be maintained until further order of the Commission.

The annual specified reasonable rate of return shall be the sum of the annual weighted costs of long-term debt, preferred stock, and common equity, as defined below. The annual weighted cost for each component of the reasonable rate of return is the product of its capital ratio and cost rate. The annual capital ratio for each component of the rate of return shall be calculated based on an average of 13 monthly balances of amounts properly includable in the Licensee's long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rates for long term debt and preferred stock shall be their respective weighted average costs for the year, and the cost of common equity shall be the interest rate

Article 34. Licensee shall allow representatives of the Tulalip Tribes of Washington to inspect the project site at any reasonable time before and during construction and operation of the Twin Falls Project. Licensee shall also maintain and make available to the Tulalip Tribes of Washington a record of project operations, including daily amount of diversion, daily record of flows over the diversion, and rate of change of both diverted flows and bypassed flows. In addition, the Licensee shall document all unusual occurrences such as load rejections, bring such events to the immediate attention of the Tulalip Tribes of Washington, and make such documentation available to such entity.

Article 35. Licensee shall discharge from the Twin Falls Project diversion weir the following interim continuous minimum flows, or the inflow to the project, whichever is less, for the protection of aquatic resources in the South Fork Snoqualmie River: (a) 75 cubic feet per second (cfs) from August 1 through April 30; and (b) 150 cfs from May 1 through July 31. The interim minimum flows may be temporarily modified if required by operating emergencies beyond the control of the Licensee and for short periods upon mutual agreement among the Licensee, the Washington Department of Game, and the Tulalip Tribes of Washington.

Article 36. Licensee shall, after consultation with the Washington State Department of Game, the Tulalip Tribes of Washington, and the U.S. Fish and Wildlife Service, conduct studies to determine a ramping rate needed at the Twin Falls Project to ensure protection of downstream fish resources. Further, Licensee shall, within 6 months of commencement of project operations, complete the study and file with the Commission a report on the results of the study, and for approval, recommendations for a ramping rate. Comments on the results of the study from the entities listed above shall be included in the filing.

Article 37. Licensee shall, after consultation with the Tulalip Tribes of Washington, the Washington Department of Game, and the U.S. Fish and Wildlife Service, implement the habitat enhancement and fishery study described in the report entitled "Aquatic Mitigation Plan, May 15, 1984, by Phillip J. Hilgert." Within 6 months of the date of issuance of this license, Licensee shall file a schedule for implementing the plan and for filing the results of the study, and recommendations, for Commission approval, for a long-term minimum flow. Comments from the above agencies shall be included in the filing.

Article 38. Licensee shall, after consultation with the Washington Department of Game, the Tulalip Tribes of Washington, and the U.S. Fish and Wildlife Service, and within 6 months from the date of issuance of this license, file for Commission approval

functional design drawings and a construction schedule for fish screens and a fish bypass system for the intake, and racks for the tailrace of the Twin Falls Project. Agency comments on the proposed designs and construction schedule shall be included in the filing. The Commission reserves the right to require changes in the design or schedule. Licensee shall construct the facilities as scheduled. Within 6 months after completion of construction of these facilities or any improvements thereto, Licensee shall file as-built drawings with the Commission.

Article 39. Licensee shall, within 1 year from the date of issuance of this license, either: (1) provide evidence that the 50-acre parcel of Bureau of Land Management land located adjacent to the intake structure has been transferred to the State of Washington; or (2) after consultation with the Washington Department of Game (WDG), identify and acquire alternative land in sufficient quantity and quality to mitigate for the loss of wildlife habitat on State lands. Comments from the WDG on the adequacy of the alternative lands shall be included in the filing.

Article 40. Licensee shall, prior to any future construction at the project, consult with the Washington State Historic Preservation Officer (SHPO) about the need for cultural resources survey and salvage work. Documentation of the nature and extent of consultation, including a cultural resources management plan and a schedule to conduct any necessary investigation prior to such construction, and a copy of a letter from the SHPO accepting the plan, shall be filed with the Commission within 6 months of any construction activity in the location of such investigations. Licensee shall make available funds in a reasonable amount for any such work as required. If any previously unrecorded archeological or historical sites are discovered during the course of construction or development of any project works or other facilities at the project, construction activity in the vicinity shall be halted, a qualified archeologist shall be consulted to determine the significance of the sites, and Licensee shall consult with the SHPO to develop a mitigative plan for the protection of significant archeological or historical resources. If Licensee and the SHPO cannot agree on the amount of money to be expended on archeological or historical work related to the project, the Commission reserves the right to require Licensee to conduct, at its own expense, any such work found necessary.

Article 41. Licensee shall file for Commission approval, within 90 days from the date of issuance of this license, a revised recreation drawing, Exhibit E-7.10 (FERC No. 4885-003), labeled "Twin Falls Recreation Plan," to show the modified configuration of project facilities associated with the upstream powerhouse location. The filing shall include an original drawing

or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 45 days before conveying any interest in project lands under this paragraph (d), the Licensee must file a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G or K map may be used), the nature of the proposed use, the identity of any Federal or State agency official consulted, and any Federal or State approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the Licensee to file an application for prior approval, the Licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraphs (c) or (d) of this article:

(1) Before conveying the interest, the Licensee shall consult with Federal and State fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

(2) Before conveying the interest, the Licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved Exhibit R or approved report on recreational resources of an Exhibit E; or, if the project does not have an approved Exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include covenants running with the land adequate to ensure that: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; and (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project.

(4) The Commission reserves the right to require the Licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised Exhibit G or K drawings would be filed for approval for other purposes.

(H) South Fork's request for a waiver of Section 4.35 of our Regulations, 18 C.F.R. §4.35 (1984), is granted.

(I) The motions to intervene jointly filed in this proceeding on February 24, 1983, by the National Marine Fisheries Service and the Tulalip Tribes of Washington; on August 17, 1983, by the Snoqualmie Tribe; and on June 17, 1983, jointly by the Washington State Department of Fisheries and the Washington State Department of Game, are granted, subject to the Commission's rules and regulations under the Federal Power Act. Participation of the interveners shall be limited to matters set forth in their motions to intervene. The admission of the interveners shall not be construed as recognition by the Commission that they might be aggrieved by any order entered in this proceeding. Furthermore, intervention is subject to the provisions of Section 385.214(d)(2) and (3) of the Commission's regulations, 18 C.F.R. § 385.214(d)(2) and (3) (1984).

(J) The Joint Petition for Coordination of Proceedings, for Development of Data, and for Hearing and Motion for Suspension and Stay of Proceedings filed in this proceeding on February 24, 1983, by the National Marine Fisheries Service and the Tulalip Tribes of Washington and the joint Motion to Intervene and for Coordination of Proceedings, for Development of Data, and for Hearing filed in this proceeding on June 17, 1983, by the Washington State Department of Fisheries and the Washington State Department of Game are denied.

(K) Puget Sound Power & Light Co.'s application for preliminary permit for the Twin Falls Project No. 5681 filed on November 24, 1981, is denied.

(L) The City of Tacoma, Department of Public Utilities' application for preliminary permit for the Twin Falls Project No. 5683 filed on November 24, 1981, is denied.

on 10-year government bonds (reported as the Treasury Department's 10 year constant maturity series) computed on the monthly average for the year in question plus four percentage points (400 basis points).

Article 49. (a) In accordance with the provisions of this article, the Licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain other types of use and occupancy, without prior Commission approval. The Licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the Licensee shall also have continuing responsibility to supervise and control the uses and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the Licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the Licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, cancelling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the Licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 water craft at a time and where said facility is intended to serve single-family type dwellings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the Licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The Licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the uses and occupancies for which it grants permission are maintained in good repair and comply with applicable State and local health and safety requirements. Before granting permission for construction of bulkheads or retaining

walls, the Licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the Licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the Licensee's costs of administering the permit program. The Commission reserves the right to require the Licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The Licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges and roads for which all necessary State and Federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the Licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The Licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary State and Federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary Federal and State water quality certifications or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary Federal and State approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres



FEDERAL POWER COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR  
UNCONSTRUCTED MAJOR PROJECT  
AFFECTING LANDS OF THE UNITED STATES

**Article 1.** The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

**Article 2.** No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: Provided, however, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

**Article 3.** The project works shall be constructed in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

Upon the completion of the project, or at such other time as the Commission may direct, the Licensee shall submit to the Commission for approval revised exhibits insofar as necessary to show any divergence from or variations in the project area and project boundary as finally located or in the project works as actually constructed when compared with the area and boundary shown and the works described in the license or in the exhibits approved by the Commission, together with a statement in writing setting forth the reasons which in the opinion of the Licensee necessitated or justified variation in or divergence from the approved exhibits. Such revised exhibits shall, if and when approved by the Commission, be made a part of the license under the provisions of Article 2 hereof.

**Article 4.** The construction, operation, and maintenance of the project and any work incidental to additions or alterations shall be subject to the inspection and supervision of the Regional Engineer, Federal Power Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of the project and for any subsequent alterations to the project. Construction of the project works or any feature or alteration thereof shall not be initiated until the program of inspection for the project works or any such feature thereof has been approved by said representative. The Licensee shall also furnish to said representative such further information as he may require concerning the construction, operation, and maintenance of the project, and of any alteration thereof, and shall notify him of the date upon which work will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

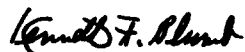
Project Nos. 4558-003,  
5681-000 & 5683-000

-25-

(M) This order is final unless an application for rehearing is filed within 30 days from the date of its issuance, as provided in Section 313(a) of the Act. The filing of an application for rehearing does not operate as a stay of the effective date of this license or of any other date specified in this order, except as specifically ordered by the Commission. The Licensee's failure to file an application for rehearing shall constitute acceptance of this license. In acknowledgment of acceptance of this license and its terms and conditions, it shall be signed for the Licensee and returned to the Commission within 60 days from the date this order is issued.

By the Commission.

( S E A L )



Kenneth F. Plumb,  
Secretary.

Project Nos. 4885-003,  
5681-000 & 5683-000

IN TESTIMONY of its acknowledgment of acceptance of all of the terms and conditions of this order, South Fork Resources, Inc. this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_\_, has caused its corporate name to be signed hereto by \_\_\_\_\_, its President, and its corporate seal to be affixed hereto and attested by \_\_\_\_\_, its Secretary, pursuant to a resolution of its Board of Directors duly adopted on the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_\_, a certified copy of the record of which is attached hereto.

By \_\_\_\_\_  
President

Attest:

\_\_\_\_\_  
Secretary

(Executed in quadruplicate)